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Shaping Minds: The Transformative Effects of Theater-Based Learning

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Response to Reviewers:	

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January 27, 2025

Abstract

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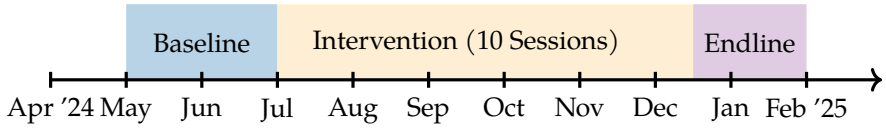
Study pre-registration: AEA RCT Registry RCT ID: AEARCTR-0014146.

Proposed timeline (*required*):



1 Introduction

Foundational skills encompassing a broad spectrum of competencies, including both soft skills and essential life skills, have been shown to be strongly predictive of success in later life outcomes (Heckman et al., 2006; Heckman and Kautz, 2012; Guerra et al., 2014; Deming, 2017; Borghans et al., 2008). These skills include emotional regulation, communication, self-efficacy, critical thinking, collaboration, and conflict resolution, among others. While a growing body of evidence suggests that these skills are malleable, identifying the optimal pedagogical methods for imparting these competencies remains an active area of research. In this paper, we examine how a novel and multifaceted curriculum delivered by facilitators using a theater-centered pedagogy impacts middle school students' acquisition of crucial foundational skills.

In this intervention, we are partnering with *Rang Kaarwaan*, a local non-profit organization (NGO) in the poor region of Champawat, Uttarakhand. This approach uses arts and theater (Boal and McBride, 2020) to empower adolescents to navigate their personal, social, and academic lives. Although theater-based techniques have been employed by NGOs and activists, their application in educational contexts remains rare.

In a meta-analysis of research on education, Lee et al. (2015) identified a lack of rigorous causal evidence on the impact of such techniques on educational outcomes, particularly regarding social and psychological aspects. Research in interdisciplinary health policy and Theater and performance studies has explored the potential of Theater-based approaches in addressing specific educational challenges. For instance, Goodwin et al. (2019), Joronen et al. (2012), and Baldwin (2009) demonstrated the effectiveness of drama-based interventions in promoting empathy and reducing bullying in schools. Walker et al. (2011) found that applied Theater techniques can be particularly beneficial for students with special educational needs, fostering inclusivity and social skills development. In the context of social issues, Gallagher (2018) argued that Theater-based pedagogy can be a powerful tool for addressing complex societal problems and promoting critical consciousness among students.

Recent neuroscientific research suggests that such pedagogy may affect different brain regions, potentially leading to significant impacts on long-term learning processes (Greaves et al., 2022). This aligns with emerging findings in the field of neuroaesthetics, where researchers are gaining insights into how various art forms, including dance, visual arts, and music, influence brain function and

cognitive processes (Omigie et al., 2014; Kirk et al., 2009). Building on these insights, our project hypothesizes that an arts and theater-based pedagogy in education can offer an effective means of imparting life skills, and socio-emotional skills (Rhoades, 2021; Hunter, 2022). Drama-based pedagogy has been theorized to enhance achievement relative to traditional instruction because facilitators rely on the social and cultural understanding of students, support their learning, and co-create meaning through dialectical interactions with other students and their surroundings (Lee et al., 2015). This approach stresses interaction over observation, with the underlying theory of change positing that arts and theater-based pedagogy builds creative and critical thinking skills that foster positive learning through active engagement and provides opportunities for reflection and growth. Empirical evidence supports this theory. Bournot-Trites et al. (2007) find that students who received drama-based instruction made better connections to curricular content, resulting in enhanced learning and increased emotional intelligence. Similarly, Nelson (2011) found that applied drama and theater techniques directly helped students become agents of change in their lives, further underscoring the potential of this innovative pedagogical approach.

The novel pedagogy developed by *Rang Kaarwaan* involves a set of interactive games, exercises, and techniques designed to promote 'problem-posing' dialogue among participants. The intervention consists of a 10-session curriculum aimed at enhancing the holistic skills of adolescents in middle schools. Each session lasts for 90 minutes, delivering approximately 15 hours of instruction over a six month period. The curriculum is structured in three stages, focusing on developing the self, surroundings, and community. By integrating these components, the curriculum strives to provide a comprehensive approach to skill development (see Section A.4 for details). In our intervention, the pedagogy, the curriculum, and its delivery are inextricably linked (making it a bundled treatment). While we use the term "curriculum", the content and delivery method (pedagogy) are deeply intertwined. In section 3.1, we will illustrate with an example that it would be difficult to imagine an analogous treatment arm with just the content combined with an alternative delivery method. To establish causal relationships between the intervention and student outcomes, we employ a clustered randomized controlled trial design. The experimental design splits 96 public schools in the district of Champawat equally into treatment and control school. The baseline sample consists of 3,909 students in grades 6 through 8. Specifically, we measure the effects of this innovative curriculum on several key outcomes, including socio-emotional skills, psychological well-being, academic performance, communication, negotiation skills, and critical thinking abilities.

Our study complements a nascent but rapidly expanding body of literature in economics that examines the efficacy of innovative pedagogies on cognitive skill development. Alan and Mumcu (2024) evaluate the impact of a pedagogical program designed to nurture children's curiosity and enhance learning outcomes for elementary school students in Turkey. In a similar vein, Ashraf et al. (2023) assess the effects of an intervention aimed at enhancing teachers' meta-learning skills on the quality of student learning and standardized test performance. More recently, Bharti et al. (2024) demonstrate the positive impact of an alternative science-based pedagogy—characterized as discovery-based learning—on higher-order cognitive and non-cognitive skills. More broadly, our research also contributes to the literature examining the malleability of non-cognitive skills, often referred to as "soft skills," and their development during formative years (Alan and Ertac, 2018; Alan et al., 2019, 2021). This body of work suggests that these skills are amenable to intervention and can be effectively cultivated during childhood and adolescence.

We make the following contributions. First, we evaluate an innovative arts and theater-based pedagogy in the context of education using a large-scale field experiment, thereby addressing an important gap in the literature. While recent studies have explored similar methodologies in the context of domestic violence prevention (Hoff et al., 2021) and in shifting attitudes of male police officers towards gender-based violence crimes (Amaral et al., 2024), our intervention extends this pedagogical approach into a broader educational framework. We contribute to the growing body of evidence on alternative, engaging teaching methods that may be particularly effective in resource-constrained environments. Secondly, our study focuses on middle school students, a demographic at a critical phase in their skill development. This phase is crucial for the formation of foundational skills in navigating interpersonal relationships with peers, as well as for the development of aspirations and habits that can significantly influence subsequent educational choices and labor market trajectories (Bracken and Crain, 1994; Kiuru et al., 2020; Hoxby, 2021). Furthermore, epidemiological studies indicate significantly higher rates of depression and anxiety among adolescents aged 12-17 years compared to younger children (Bitsko et al., 2022; Perou et al., 2013). Our curriculum is thus designed to intervene at this critical developmental stage to enhance the emotional well-being of adolescents. Recent research has established the important implications of poor mental health on various socioeconomic outcomes, including poverty traps (Baranov et al., 2020), employment, and income (Ridley et al., 2020). This underscores the potential long-term impact of our intervention. Finally, the curriculum developed by *Rang Kaarwaan* distinguishes itself from other educational pedagogies by encompassing a uniquely

broad spectrum of skills. These include leadership abilities, effective communication, teamwork and collaboration, socio-emotional competencies, critical thinking, gender norms and conflict resolution.[1] Additionally, this curriculum is delivered by trained facilitators drawn from the local community after a rigorous selection process, avoiding the implementation issues relating to teachers' commitment (Cramer et al., 2021).

Finally, the findings from this study will contribute significantly to the growing body of literature on alternative pedagogical approaches, providing causal evidence to inform educational policy and practice. By rigorously evaluating the efficacy of theater-based learning as a complementary approach to traditional educational methods, we aim to shed light on its potential to improve students' foundational skills. Our research has broader implications for the field of education. The results are likely to offer valuable insights for educators, policymakers, and researchers seeking innovative strategies to improve student engagement and learning outcomes across diverse educational settings. By examining the impact of this theater-based intervention on various cognitive and non-cognitive skills, we hope to provide a nuanced understanding of how such approaches can be effectively integrated into existing educational frameworks.

2 Background

2.1 Context

Champawat, a district in the Kumaon region of Uttarakhand, India, is predominantly rural, with approximately 84 percent of its population residing in non-urban areas (see Figure 1). According to the Census (2011), the district's overall literacy rate is 80 percent, with male and female literacy rates at 91.61 percent and 68.05 percent, respectively, showing considerable variation across blocks and sectors (urban vs. rural).

Other socioeconomic indicators reveal that 33.68 percent of the rural population and 48.20 percent

[1]Our intervention emphasizes teamwork and collaboration, providing a setting that facilitates interaction among students across gender, socioeconomic class, and caste lines. This approach aligns with recent research on the benefits of diverse social interactions in educational settings. Rao (2019) investigates the impact of integrating students from different economic backgrounds and finds that exposure to economically disadvantaged classmates enhances prosocial behavior and egalitarian attitudes among wealthier students. This integration leads to increased generosity and a greater willingness among affluent students to engage socially with their less privileged peers outside of school, thereby reducing discrimination. In a similar vein, Lowe (2021) examines the effects of collaborative contact in the context of cricket leagues in India. His study reveals that such interactions can significantly reduce barriers to cross-caste engagement. These findings underscore the potential of our intervention to foster inclusive social dynamics and mitigate longstanding societal divisions.

of the urban population live below the poverty line (Census, 2011). The proportion of main workers in the total workforce in Champawat is 24.15 percent, which is lower than the state average of 28.46 percent (Census, 2011). A notable gender gap exists in work participation rates, with 46.08 percent for males and 30.45 percent for females.

Regarding school infrastructure, all schools in Champawat have buildings, approximately 97.6 percent of public schools have girls' toilets, and nearly all schools have libraries. The dropout rate in government schools is 0.7 percent at the primary level but increases in higher grades, particularly at the secondary level, where it reaches 15.08 percent for boys and 9.61 percent for girls. Notably, only 38 percent of girls in Champawat continue their education beyond 10^{th} grade, highlighting a pressing need to address educational inequities and provide opportunities for foundational skill development in the district.

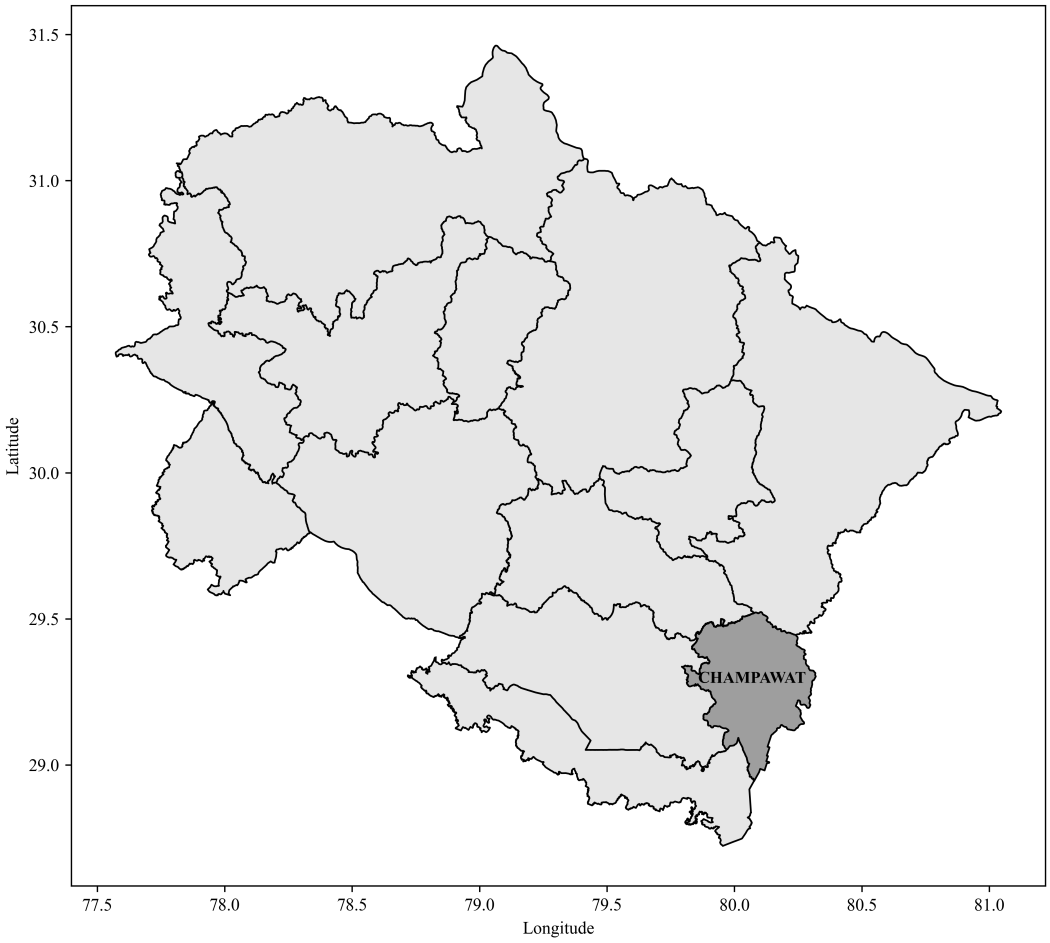


Figure 1: Champawat District within the Uttarakhand State

2.2 Sample Descriptive Statistics

Our study is focused on students in grades 6 through 8 attending government schools in Uttarakhand's Champawat district. The baseline survey revealed that approximately 53 percent of the participants were female (see Table 1). School infrastructure in the area is limited, with only 48 percent of schools accessible via all-weather roads and 50 percent equipped with information and communication technology. Notably, just 60 percent of the schools offer education up to grade 12 (higher secondary level). Students face significant travel challenges, with an average commute time of 35 minutes to reach their schools (see Table 2). These factors collectively highlight the educational accessibility issues in the region, particularly for female students who comprise the majority of our study population.

Table 1: Summary Statistics: School Characteristics

	N	Mean	St. Dev	Min	Max
	(1)	(2)	(3)	(4)	(5)
Approach by all-weather roads	96	0.479	0.502	0	1
Information and communication technology infrastructure	96	0.500	0.503	0	1
School has grade 12	96	0.604	0.492	0	1
# Surveyed in baseline	96	40.719	31.271	8	241
Share of girls in baseline	96	0.528	0.192	0	1

NOTES: Data on school characteristics for the first three variables were sourced from UDISE+ by the Department of School Education & Literacy (2021-2022).

Table 2: Summary Statistics: Child Characteristics

	N	Mean	St. Dev	Min	Max
	(1)	(2)	(3)	(4)	(5)
Child's grade	3909	7.021	0.824	6	8
Child's gender (1=Male/0=Female)	3909	0.556	0.497	0	1
Time taken to reach school (in minutes)	3909	32.551	27.023	0	120
Social desirability index	3909	3.071	0.533	1	5

NOTES: Questions on child demography were asked in the baseline survey, and are detailed in Appendix A.1.

Our survey of household characteristics (see Table 3) revealed that families in this region tend to be large, with an average of over 6 members per household. These families predominantly belong to lower socio-economic strata, as evidenced by their limited ownership of assets. Only 8 percent of households own a car, 4 percent possess a computer, and 17 percent have a two-wheeler. While slightly more than half (52 percent) own a gas stove, just 21 percent have a bicycle. Interestingly, despite the overall low asset ownership, internet access is relatively high, with approximately 42 percent of households having

internet connectivity.

Table 3: Summary Statistics: Household Characteristics

	N	Mean	St. Dev	Min	Max
	(1)	(2)	(3)	(4)	(5)
Number of household members*	3907	6.501	2.619	0	20
Part of a sibling household (Y=1/N=0)	3906	0.999	0.032	0	1
Household assets:					
Household asset: Owns colour TV	3909	0.515	0.500	0	1
Household asset: Owns bicycle	3909	0.215	0.411	0	1
Household asset: Owns fan	3909	0.455	0.498	0	1
Household asset: Owns fridge	3909	0.276	0.447	0	1
Household asset: Owns motorcycle/scooter	3909	0.175	0.380	0	1
Household asset: Owns cooler	3909	0.103	0.303	0	1
Household asset: Owns car	3909	0.086	0.280	0	1
Household asset: Owns air conditioner (AC)	3909	0.020	0.142	0	1
Household asset: Owns washing machine	3909	0.082	0.274	0	1
Household asset: Owns computer/laptop	3909	0.049	0.217	0	1
Household asset: Owns internet	3909	0.418	0.493	0	1
Household asset: Owns gas stove (LPG)	3909	0.520	0.500	0	1
Household asset: Owns inverter/electric generator	3909	0.050	0.218	0	1
Household asset: Owns sofa	3909	0.260	0.439	0	1

NOTES: Questions on household characteristics were asked in the baseline survey, and are detailed in Appendix A.1.

* 0.15 % of our sample report 0 household members. We will be verifying this during our endline survey.

Parental characteristics in our sample reveal significant gender disparities in employment and education. As shown in Table 4, approximately 75 percent of mothers are not employed outside the home, compared to only 16 percent of fathers. The majority of employed fathers (approximately 40 percent) work in private firms, with a mere 9 percent working in government jobs. Educational attainment also exhibits a gender gap (see Table 5). While 20 percent of mothers have never attended school, this figure is lower for fathers at 14 percent. Moreover, there is a substantial difference in higher education levels: about 35 percent of mothers have completed class 10 or above, whereas 55 percent of fathers have achieved this educational milestone. These statistics underscore the pronounced gender disparities in both employment and educational attainment among parents in our study population, which are likely to have implications for their children's educational opportunities and outcomes.

Table 4: Summary Statistics: Parents Occupation

	N	Mean	St. Dev	Min	Max
	(1)	(2)	(3)	(4)	(5)
Mother's occupation:					
Mother: Not working outside home	3893	0.753	0.431	0	1
Mother: Private firm employee	3893	0.056	0.229	0	1
Mother: Government job	3893	0.065	0.247	0	1
Mother: Family farm/non-farm business	3893	0.094	0.292	0	1
Father's occupation:					
Father: Not working outside home	3834	0.155	0.362	0	1
Father: Private firm employee	3834	0.402	0.490	0	1
Father: Government job	3834	0.091	0.287	0	1
Father: Family farm/non-farm business	3834	0.176	0.380	0	1

NOTES: Questions on parents occupation were asked in the baseline survey, and are detailed in Appendix A.1.

Table 5: Summary Statistics: Parents Education

	N	Mean	St. Dev	Min	Max
	(1)	(2)	(3)	(4)	(5)
Mother's education:					
Mother: Never went to school	3798	0.199	0.399	0	1
Mother: Upto Primary school	3798	0.223	0.416	0	1
Mother: Upto grade 10	3798	0.157	0.364	0	1
Mother: Upto grade 12	3798	0.130	0.337	0	1
Mother: Master's degree & beyond	3798	0.023	0.150	0	1
Mother: Vocational training	3798	0.018	0.133	0	1
Mother: Class 10 and above	3909	0.347	0.476	0	1
Father's education:					
Father: Never went to school	3760	0.135	0.342	0	1
Father: Upto Primary school	3760	0.122	0.328	0	1
Father: Upto grade 10	3760	0.243	0.429	0	1
Father: Upto grade 12	3760	0.228	0.420	0	1
Father: Master's degree & beyond	3760	0.036	0.186	0	1
Father: Vocational training	3760	0.028	0.164	0	1
Father: Class 10 and above	3909	0.553	0.497	0	1

NOTES: Questions on parents education were asked in the baseline survey, and are detailed in Appendix A.1.

Our study collected various outcome measures for the sampled students. On average, students were absent for approximately 1.5 days during the week preceding the survey. Similarly, students reported being late to school on an average of 1.2 days in the same period. These figures suggest that a significant portion of instructional time is being lost due to attendance irregularities, which is likely to have substantial implications for student learning outcomes and overall educational achievement. Furthermore, only 48 percent of the students in our sample aspired to go to college. We report the

descriptive statistics for our outcome variables in Table 6.

Table 6: Summary Statistics: Child Outcomes at Baseline

	N	Mean	St. Dev	Min	Max
	(1)	(2)	(3)	(4)	(5)
Direct Outcomes					
Self-efficacy index	3909	3.931	0.915	1	5
Self-reflection index	3909	4.380	0.837	1	6
Emotional regulation index	3909	3.743	0.821	1	5
Empathy index	3909	2.402	0.478	1	4
Number of friends	3909	5.638	5.250	0	24
Was bullied in past 3 months (1=Yes/0=No)	3909	0.768	0.422	0	1
Bullied someone in past 3 months (1=Yes/0=No)	3903	0.668	0.471	0	1
Vignette: Conflict resolution (Joint family scenario)	3886	0.409	0.492	0	1
Vignette: Conflict resolution (Class representative)	3891	0.420	0.494	0	1
Vignette: Negotiation (Army vs Hotel)	3909	0.537	0.499	0	1
Vignette: Negotiation (Youtube vs Studies)	3909	0.407	0.491	0	1
Communication index*	3909	0.015	0.992	-2	1
Active Listening Attitudes Scale*	3909	-0.013	0.995	-2	2
Public Speaking Anxiety Scale*	3909	-0.017	0.985	-2	3
Likes to work alone (1=Yes/0=No)	3909	0.644	0.479	0	1
Likes working on group projects (1=Yes/0=No)	3909	0.517	0.500	0	1
Time management index	3909	2.468	0.733	1	5
Critical-thinking index	3909	3.027	0.545	1	4
Gender attitude index	3909	2.806	0.472	1	5
Downstream Outcomes					
Well-being index*	3909	-0.039	1.002	-3	2
Physical well-being sub-index *	3909	-0.008	1.001	-2	1
Psychological well-being sub-index *	3909	-0.042	0.997	-2	2
Relationship well-being sub-index *	3909	-0.027	1.015	-2	1
Days absent in the past week	3906	1.537	1.844	0	7
Days late to school in the past week	3904	1.193	1.625	0	7
Aspires to go to college (1=Yes/0=No)	3895	0.482	0.500	0	1
Continue education after marriage (1=Yes/0=No)	3909	0.553	0.497	0	1

NOTES: $*$ Index created as per Anderson (2008), and standardised using control group means and standard deviations (detailed steps in Appendix A.2). Other indices are simple averages of the relevant components from their respective scales. The variation in the number of observations for certain questions arises from the respondents' decision to not answer them.

3 Experimental Design

3.1 The Intervention: Theater Based Curriculum

Our curriculum is based on applied theater as a pedagogical approach (Boal and McBride, 2020). This curriculum has been developed by pedagogical experts over the last three years, and will be implemented by our local partner, *Rang Kaarwaan*. The pedagogy involves a set of interactive games, exercises, and techniques designed to promote a 'problem-posing' dialogue among participants, and it is believed that this approach can be a potent tool to foster student engagement, thereby improving educational and socio-emotional outcomes. Theater-based pedagogical techniques have the potential to enhance foundational skills through their capacity to portray reality or create alternative realities in a compelling and engaging manner.

This intervention involves a 10-session curriculum followed by a final reflection session. Since each session is 90 minutes long, the curriculum delivers 15 hours of instruction which will be spread over six months (July-December 2024). The sessions are delivered by facilitators who visit treatment schools in pairs. These facilitators have been drawn from the local community after a series of extensive interviews. Out of over 300 applicants, 30 were eventually chosen and trained as facilitators to deliver the curriculum. In particular, the sessions will cover the following set of topics:

1. Introduction to Arts-Based Social & Emotional Learning Curriculum
2. Body Image and Awareness
3. Emotional Awareness
4. Aspects of Communication and Interpersonal Skills
5. Goal setting and Strengths, Weaknesses, Opportunities, and Threats (SWOT)
6. Core Values and Self-identity
7. Teamwork and Collaboration
8. Leadership
9. Conflict Resolution
10. Gender Norms
11. Reflection Session

The curriculum therefore targets various cognitive and non-cognitive skills, including emotional regulation, communication, teamwork, leadership, and goal setting. While a part of the curriculum is

more focused on improving the self, it also has components that covers gender norms, understanding and navigating conflict. As such, it has the goal to have wider impacts that spillover to the local surroundings and society. By including these components, the curriculum aims to provide a comprehensive approach to skill development and empower adolescents to navigate their personal, social, and academic lives. A detailed outline of the curriculum is provided in Appendix A.4 and pictures from the field are in Appendix A.7.

In our intervention, it is difficult to separate the curriculum from the pedagogy. For instance, consider the body image and awareness session. Students begin with physical games that cause exertion, after which facilitators guide them to notice their bodily sensations—an inherently experiential approach to teaching body awareness. The session then progresses to role-playing exercises where half the students are randomly assigned hidden "physical flaws", while others whisper comments about these flaws to students. Facilitators guide the students through their experienced feelings in a lengthy debriefing session. This approach recreates real-life situations that cause body image issues in a safe environment. The experiential and immersive nature of this curriculum makes it challenging to separate the content from its delivery method, as the learning occurs through direct participation and guided reflection.

In our intervention, the control schools serve as pure controls, representing the business-as-usual scenario. It is crucial to emphasize that the implemented curriculum will be conducted on school premises, replacing existing physical education and well-being classes. Physical education periods happen every day in schools. In the treated schools, our intervention replaced these classes only on one day roughly every two weeks. Since we were concerned about substitution effects (especially if we had replaced math or science) we conducted a scoping exercise. This revealed that during the “physical education” and “well-being classes”, students typically spent time talking to friends and walking around the school premises—effectively treating them as “free periods”. This, along with the fact that the intervention also involves some physical activity and games made it the most natural choice to mitigate substitution effects. Furthermore, we are collecting data during each school visit to track which classes are being displaced.

To address concerns about time spent away from home activities, we ensured that the intervention is not conducted after school hours. We have worked closely with school administration to establish a fixed time for this program.

Teachers and principals from the treatment schools, as well as our intervention facilitators, agreed that the ideal time for this would be the last period of the day. For example, the timetable collected during our school visits in July/August 2023 (see Table A.8) lists the last period as "Physical education" in this slot.

3.2 Randomization

We use a clustered design to identify the effects of theater-based pedagogy on student outcomes. The unit of observation for this intervention is a school, and the target population is students in grades 6-8 (approximately 3,909 students). The intervention will be implemented in 96 schools in the district of Champawat in the academic year 2024-2025.

The treatment group consists of 48 schools that will receive the 10-sessions curriculum designed to enhance the foundational skills of students in the middle school. The remaining 48 schools will continue with business as usual and will serve as the control group. To assess the causal impact of the intervention, we will compute the differences in outcomes between students in the treatment and control groups.

3.3 Sample

The sample includes 3,909 students from grades 6 to 8, distributed across 96 schools in the Champawat district. These schools are located within the five sub-districts (Tehsils) of Barakot, Champawat, Lohaghat, Pati, and Purnagiri. We present a map with the location of schools in the treatment and control groups in Figure 2.

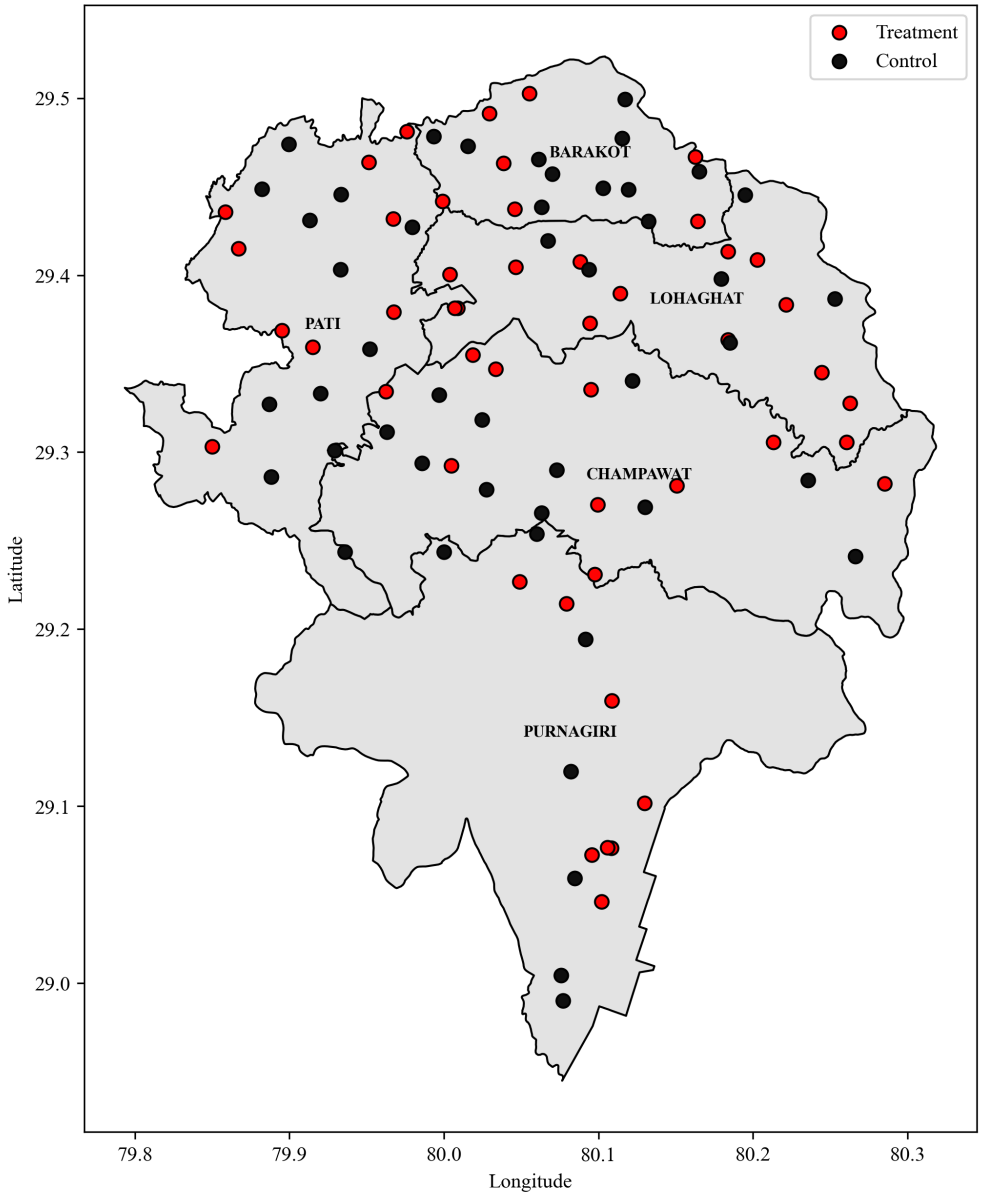


Figure 2: Geo-spatial Distribution of Treatment and Control Schools

3.4 Balance Tables

We report the baseline balance in the following tables, where we show that randomization was successful. In particular, we show balance on school characteristics in Table 7, child characteristics in Tables 8, and household characteristics in Table 9. We show balance on parents occupation and education in Tables 10 and 11, respectively. Finally, we show balance on outcome variables in Tables 12 and 13.

Our analysis of balance across treatment and control groups reveals that out of 66 variables examined, only 2 exhibit statistically significant differences at the 10% level. This high degree of balance across the

vast majority of variables suggests that our randomization process was largely successful in creating comparable groups, thereby strengthening the internal validity of our study. The minimal imbalance observed is within the range expected by chance, given the number of variables tested.

Table 7: Balance Table: School Characteristics

Variable	Control	Treatment	Difference
	(1)	(2)	(3)
Approach by all-weather roads	0.500	0.458	-0.042
	(0.505)	(0.504)	(0.103)
Information & communications technology infrastructure	0.479	0.521	0.042
	(0.505)	(0.505)	(0.103)
School has grade 12	0.562	0.646	0.083
	(0.501)	(0.483)	(0.101)
# Surveyed in baseline	40.708	40.729	0.021
	(26.820)	(35.457)	(6.417)
Share of girls in baseline	0.542	0.513	-0.028
	(0.168)	(0.215)	(0.039)
Observations	48	48	96

NOTES: Standard errors are clustered at the school level (in parentheses). Data on school characteristics for the first three variables were sourced from UDISE+ by the Department of School Education & Literacy (2021-2022). Column (1) depicts the mean of the school characteristics of the schools in the control group. Column (2) depicts the mean of the school characteristics of the schools in the treatment group. Column (3) depicts difference in means of the school characteristics of the treatment group in comparison to the control group. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table 8: Balance Table: Child Characteristics

Variable	Control	Treatment	Difference
	(1)	(2)	(3)
Child's grade	7.008	7.035	0.027
	(0.826)	(0.821)	(0.027)
Child's gender (1=Male/0=Female)	0.547	0.565	0.018
	(0.498)	(0.496)	(0.066)
Time taken to reach school (in minutes)	32.276	32.826	0.550
	(26.407)	(27.630)	(3.060)
Social desirability index	3.058	3.083	0.025
	(0.520)	(0.546)	(0.026)
Observations	1,954	1,955	3,909

NOTES: Standard errors are clustered at the school level (in parentheses). Column (1) depicts the mean of the child characteristics for those who were in the control group. Column (2) depicts the mean of the child characteristics for those who were in the treatment group. Column (3) depicts difference in means of the child characteristics of the treatment group in comparison to the control group. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table 9: Balance Table: Household Characteristics

Variable	Control	Treatment	Difference
	(1)	(2)	(3)
Number of household members	6.564	6.439	-0.125
	(2.633)	(2.603)	(0.128)
Part of a sibling household (Y=1/N=0)	0.999	0.999	0.000
	(0.032)	(0.032)	(0.001)
Household assets:			
Household asset: Owns colour TV	0.514	0.515	0.001
	(0.500)	(0.500)	(0.033)
Household asset: Owns bicycle	0.180	0.250	0.070
	(0.384)	(0.433)	(0.062)
Household asset: Owns fan	0.440	0.470	0.029
	(0.497)	(0.499)	(0.071)
Household asset: Owns fridge	0.253	0.299	0.046
	(0.435)	(0.458)	(0.061)
Household asset: Owns motorcycle/ scooter	0.151	0.199	0.049
	(0.358)	(0.400)	(0.035)
Household asset: Owns cooler	0.062	0.143	0.081*
	(0.241)	(0.350)	(0.045)
Household asset: Owns car	0.085	0.087	0.002
	(0.279)	(0.282)	(0.011)
Household asset: Owns air conditioner (AC)	0.017	0.024	0.006
	(0.131)	(0.152)	(0.005)
Household asset: Owns washing machine	0.067	0.096	0.029
	(0.250)	(0.295)	(0.024)
Household asset: Owns computer/laptop	0.048	0.051	0.004
	(0.213)	(0.220)	(0.009)
Household asset: Owns internet	0.429	0.407	-0.022
	(0.495)	(0.491)	(0.041)
Household asset: Owns gas stove (LPG)	0.520	0.520	-0.000
	(0.500)	(0.500)	(0.037)
Household asset: Owns inverter/electric Generator	0.041	0.059	0.017
	(0.199)	(0.235)	(0.014)
Household asset: Owns sofa	0.260	0.259	-0.001
	(0.439)	(0.438)	(0.024)
Observations	1,954	1,955	3,909

NOTES: Standard errors are clustered at the school level (in parentheses). Columns (1) depicts the mean of the household characteristics for those who were in the control group. Columns (2) depicts the mean of the household characteristics for those who were in the treatment group. Columns (3) depicts difference in means of the household characteristics of the treatment group in comparison to the control group. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table 10: Balance Table: Parent Characteristics – Occupation

Variable	Control	Treatment	Difference
	(1)	(2)	(3)
Mother's Occupation:			
Mother: Not working outside home	0.774	0.733	-0.041
	(0.419)	(0.443)	(0.033)
Mother: Private firm employee	0.049	0.062	0.013
	(0.217)	(0.242)	(0.009)
Mother: Government job	0.058	0.072	0.014
	(0.234)	(0.259)	(0.014)
Mother: Family farm/non-farm business	0.090	0.098	0.008
	(0.286)	(0.298)	(0.016)
Father's Occupation:			
Father: Not working outside home	0.155	0.154	-0.001
	(0.362)	(0.361)	(0.023)
Father: Private firm employee	0.426	0.378	-0.048
	(0.495)	(0.485)	(0.034)
Father: Government job	0.091	0.090	-0.001
	(0.288)	(0.286)	(0.014)
Father: Family farm/non-farm business	0.160	0.191	0.030
	(0.367)	(0.393)	(0.021)
Observations	1,954	1,955	3,909

NOTES: Standard errors are clustered at the school level (in parentheses). Columns (1) depicts the mean of the parent characteristics for those who were in the control group. Columns (2) depicts the mean of the parent characteristics for those who were in the treatment group. Columns (3) depicts difference in means of the parent characteristics of the treatment group in comparison to the control group. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table 11: Balance Table: Parent Characteristics – Education

Variable	Control	Treatment	Difference
	(1)	(2)	(3)
Mother's Education:			
Mother: Never went to school	0.183	0.214	0.030
	(0.387)	(0.410)	(0.029)
Mother: Upto primary school	0.233	0.213	-0.020
	(0.423)	(0.409)	(0.020)
Mother: Upto grade 10	0.151	0.163	0.012
	(0.358)	(0.369)	(0.015)
Mother: Upto grade 12	0.119	0.141	0.022
	(0.324)	(0.348)	(0.016)
Mother: Master's degree & beyond	0.025	0.021	-0.005
	(0.157)	(0.142)	(0.005)
Mother: Vocational training	0.017	0.019	0.002
	(0.129)	(0.137)	(0.005)
Mother: Class 10 and above	0.331	0.364	0.033
	(0.471)	(0.481)	(0.026)
Father's Education:			
Father: Never went to school	0.112	0.159	0.047*
	(0.315)	(0.366)	(0.025)
Father: Upto primary school	0.122	0.123	0.001
	(0.327)	(0.328)	(0.015)
Father: Upto grade 10	0.252	0.233	-0.019
	(0.434)	(0.423)	(0.020)
Father: Upto grade 12	0.244	0.213	-0.030
	(0.429)	(0.410)	(0.023)
Father: Master's degree & beyond	0.038	0.034	-0.004
	(0.190)	(0.182)	(0.009)
Father: Vocational training	0.025	0.030	0.005
	(0.156)	(0.172)	(0.007)
Father: Class 10 and above	0.574	0.531	-0.043
	(0.495)	(0.499)	(0.034)
Observations	1,954	1,955	3,909

NOTES: Standard errors are clustered at the school level (in parentheses). Columns (1) depicts the mean of the parent characteristics for those who were in the control group. Columns (2) depicts the mean of the parent characteristics for those who were in the treatment group. Columns (3) depicts difference in means of the parent characteristics of the treatment group in comparison to the control group. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table 12: Balance Table: Child Outcomes at Baseline – Direct Outcomes

Variable	Control	Treatment	Difference
	(1)	(2)	(3)
Self-efficacy index	3.954	3.909	-0.045
	(0.906)	(0.923)	(0.067)
Self-reflection index	4.392	4.368	-0.024
	(0.824)	(0.850)	(0.052)
Emotional regulation index	3.764	3.722	-0.043
	(0.807)	(0.834)	(0.054)
Empathy index	2.395	2.409	0.014
	(0.472)	(0.484)	(0.023)
Number of friends	5.792	5.483	-0.309
	(5.331)	(5.164)	(0.367)
Was bullied in past 3 months (1=Yes/0=No)	0.770	0.767	-0.003
	(0.421)	(0.423)	(0.018)
Bullied someone in past 3 months (1=Yes/0=No)	0.675	0.662	-0.012
	(0.469)	(0.473)	(0.023)
Vignette: Conflict resolution (Joint family scenario)	0.423	0.396	-0.027
	(0.494)	(0.489)	(0.021)
Vignette: Conflict resolution (Class representative)	0.417	0.424	0.008
	(0.493)	(0.494)	(0.024)
Vignette: Negotiation (Army vs Hotel)	0.547	0.527	-0.019
	(0.498)	(0.499)	(0.017)
Vignette: Negotiation (Youtube vs Studies)	0.400	0.414	0.014
	(0.490)	(0.493)	(0.032)
Communication index*	-0.000	0.030	0.030
	(1.000)	(0.984)	(0.044)
Active Listening Attitudes Scale*	0.000	-0.026	-0.026
	(1.000)	(0.990)	(0.046)
Public Speaking Anxiety Scale*	0.000	-0.034	-0.034
	(1.000)	(0.971)	(0.046)
Likes to work alone (1=Yes/0=No)	0.647	0.642	-0.005
	(0.478)	(0.480)	(0.029)
Likes working on group projects (1=Yes/0=No)	0.513	0.520	0.007
	(0.500)	(0.500)	(0.029)
Time management index	2.468	2.468	0.001
	(0.733)	(0.734)	(0.035)
Critical-thinking index	3.027	3.027	0.000
	(0.554)	(0.536)	(0.030)
Gender attitude index	2.805	2.807	0.002
	(0.466)	(0.478)	(0.020)
Observations	1,954	1,955	3,909

NOTES: $*$ Indices created as per Anderson (2008) and standardised using control group means and standard deviations (Detailed steps in Appendix A.2). Standard errors are clustered at the school level (in parentheses). Column (1) depicts the mean of the child characteristics for those who were in the control group. Column (2) depicts the mean of the child characteristics for those who were in the treatment group. Column (3) depicts difference in means of the child characteristics of the treatment group in comparison to the control group. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$

Table 13: Balance Table: Child Characteristics at Baseline – Downstream Outcomes

Variable	Control	Treatment	Difference
	(1)	(2)	(3)
Well-being index*	-0.000	-0.078	-0.078
	(1.000)	(1.003)	(0.057)
Physical well-being sub-index *	0.000	-0.015	-0.015
	(1.000)	(1.002)	(0.051)
Psychological well-being sub-index *	0.000	-0.084	-0.084
	(1.000)	(0.993)	(0.055)
Relationship well-being sub-index *	-0.000	-0.055	-0.055
	(1.000)	(1.029)	(0.053)
Days absent in the past week	1.595	1.479	-0.117
	(1.884)	(1.803)	(0.126)
Days late to school in the past week	1.221	1.164	-0.056
	(1.602)	(1.648)	(0.118)
Aspires to go to college (1=Yes/0=No)	0.488	0.477	-0.011
	(0.500)	(0.500)	(0.033)
Continue education after marriage (1=Yes/0=No)	0.551	0.555	0.004
	(0.498)	(0.497)	(0.031)
Observations	1,954	1,955	3,909

NOTES: $*$ Indices created as per Anderson (2008) and standardised using control group means and standard deviations (Detailed steps in Appendix A.2). Standard errors are clustered at the school level (in parentheses). Column (1) depicts the mean of the child characteristics for those who were in the control group. Column (2) depicts the mean of the child characteristics for those who were in the treatment group. Column (3) depicts difference in means of the child characteristics of the treatment group in comparison to the control group. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$

3.5 Statistical Power

Table 14 shows the minimum detectable effect (MDE) size for all our direct and downstream outcomes for which we have measures at baseline. It also includes the control mean, the intra-cluster correlation, and the number of students surveyed at baseline in the treated and control schools. An important direct outcome in our context is empathy. The control mean for the empathy index is 2.395, and we are powered to detect a change of 0.063. This translates to a change of 2.6 percent relative to the control mean. Next, consider bullying, where 77 percent of students in the control schools at baseline experienced being bullied in the last three months. In this case, we will be able to detect a 5 percentage point change. As an example of a downstream outcome, consider the standardized well-being index. For this outcome, we are powered to detect a 0.147 standard deviation change in well-being. Finally, turning to aspirations, 48.8 percent of the students in our control sample want to go to college. We are

powered to detect a minimum effect size of 9.1 percentage points (18 percent change). Overall, based on the baseline data we are well powered to detect meaningful changes for several key outcomes.

Table 14: Power Calculation

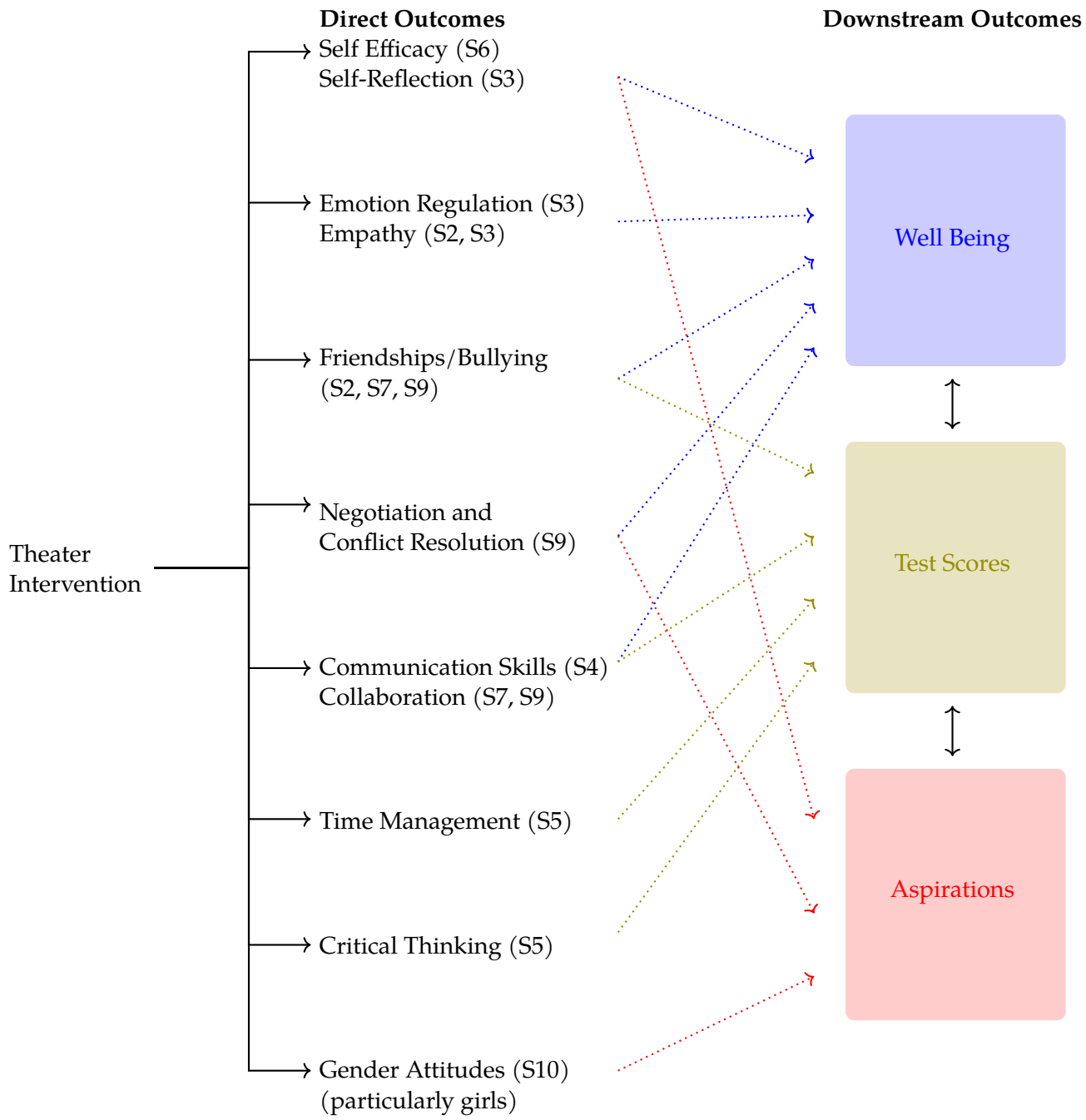
	MDE	Control Mean	ICC	N(Control)	N(Treatment)
Direct Outcomes					
Self-efficacy index	0.175	3.954	0.090	1953	1955
Self-reflection index	0.142	4.392	0.065	1953	1955
Emotional regulation index	0.146	3.764	0.074	1953	1955
Empathy index	0.063	2.395	0.030	1953	1955
Number of friends	0.985	5.792	0.085	1953	1955
Was bullied in past 3 months	0.050	0.770	0.018	1953	1955
Bullied someone in past 3 months	0.065	0.675	0.034	1950	1952
Conflict resolution (Joint family scenario)	0.056	0.423	0.016	1941	1944
Conflict resolution (Class representative)	0.065	0.417	0.029	1941	1949
Negotiation (Army vs Hotel)	0.050	0.547	0.007	1953	1955
Negotiation (YouTube vs Studies)	0.083	0.400	0.065	1953	1955
Communication index*	0.126	0.000	0.025	1953	1955
Active Listening Attitudes Scale*	0.131	0.000	0.029	1953	1955
Public Speaking Anxiety Scale*	0.112	0.000	0.016	1953	1955
Likes to work alone	0.076	0.647	0.054	1953	1955
Likes working on group projects	0.077	0.513	0.050	1953	1955
Time management index	0.104	2.468	0.038	1953	1955
Critical-thinking index	0.083	3.027	0.048	1953	1955
Gender attitude index	0.059	2.805	0.025	1953	1955
Downstream Outcomes					
Well-being index*	0.147	0.000	0.042	1953	1955
Physical well-being sub-index *	0.124	0.000	0.023	1953	1955
Phy wellbeing sub index	0.145	0.000	0.041	1953	1955
Rel wellbeing sub index	0.132	0.000	0.028	1953	1955
Days absent in the past week	0.326	1.595	0.073	1952	1953
Days late in the past week	0.284	1.221	0.071	1952	1952
Aspires to go to college	0.091	0.488	0.079	1949	1946
Continue education after marriage	0.080	0.551	0.056	1953	1955

NOTES: The number of clusters in the treatment and the control groups is the same, and equals 48 each (96 total). Clustering is done at the school level. $*$ Indices created as per Anderson (2008) and standardised using control group means and standard deviations (Detailed steps in Appendix A.2). N = number of observations. Column (1) depicts the minimum detectable effect (MDE). Column (2) depicts the mean of the control group. Column (3) depicts intracluster correlation. Column (4) depicts the number of observations in control group, and column (5) depicts the number of observations in the treatment group.

4 Theory of Change

We now focus on presenting our theory of change as illustrated through an outcome mapping in Figure 3. This figure shows that the intervention directly targets a range of outcomes through one or more sessions. In the parentheses next to these direct outcomes we list the most relevant sessions associated with them (our ten sessions are abbreviated as S1 through S10). We then map the relationships between these direct outcomes and the key downstream outcomes (overall well-being, test scores, and aspirations). We briefly consider some examples of these relationships here. Improved self-efficacy and self-reflection can have downstream impacts on feelings of well-being and change aspirations as well. While interpersonal relationships like friendships and bullying can impact well-being, they can also impact test scores. Negotiation and conflict resolution skills can impact well-being but may also be important in overcoming some of the barriers to aspirations. As indicated in the figure, the downstream outcomes are interconnected, with bidirectional relationships. Well being and test scores can influence each other, and test scores and aspirations can also be reinforcing.

While not explicitly shown in the figure, some of the hypothesized impacts here may well work through improved student engagement, which is an important intermediary outcome. In the endline student surveys, we ask if they participate more or pay greater attention in class, including listening carefully (see Appendix Table A5 for the full list of questions). Potentially, the improvements in self-efficacy, confidence, communication and listening that the curriculum directly targets could affect these engagement measures. Improved engagement in turn can further impact downstream outcomes like test scores. We also measure student engagement in the classroom by asking teachers.



Notes: The figure lists the direct outcomes and skills targeted by the curriculum. The sessions of the curriculum that focus on these outcomes are indicated in parentheses (for instance, S6 refers to session 6). The figure also illustrates potential links between direct outcomes and downstream outcomes.

Figure 3: Theory of Change

While the outcome mapping shows which outcomes are targeted and their relationships to each other, we additionally present some hypotheses on *why* such an intervention may work. We consider two strands of literature. Broadly speaking, the first set of theories come from the social sciences (Lee et al., 2015). In this meta-analysis Lee et al. (2015) highlights that drama-based pedagogy (DBP) draws its effectiveness from two theoretical frameworks: social constructivism and self-determination theory (SDT). Under social constructivism, DBP facilitates learning through interactive, scaffolded experiences where students and facilitators co-construct meaning through social interactions, as seen in exercises like "Image Work" where students physically represent and collectively interpret concepts. Through SDT, DBP supports students' basic psychological needs for autonomy (by allowing students to direct their learning), competence (by enabling participation at individual comfort levels), and relatedness (through community-building activities). Research indicates that this dual-theoretical approach leads to deeper content understanding, increased engagement, and stronger academic outcomes compared to traditional teaching methods.

Building on these insights, our project hypothesizes that an arts and theater-based pedagogy in education can offer a more effective means of imparting life skills, socio-emotional skills, gender equality, and comprehensive sexuality education to children (Rhoades, 2021; Hunter, 2022). Drama-based pedagogy has been theorized to enhance achievement relative to traditional instruction because facilitators rely on the social and cultural understanding of students, support their learning, and co-create meaning through dialectical interactions with other students and their surroundings (Lee et al., 2015). This approach stresses interaction over observation, with the underlying theory of change positing that arts and theater-based pedagogy builds creative and critical thinking skills that foster positive learning through active engagement, and opportunities for reflection and growth.

Empirical evidence supports this theory, with Bournot-Trites et al. (2007) finding that students who received drama-based instruction made better connections to curricular content, resulting in enhanced learning and increased emotional intelligence. Similarly, Nelson (2011) found that applied drama and theater techniques directly help students become agents of change in their lives, further underscoring the potential of this innovative pedagogical approach. Additional studies have reinforced these findings, for example, Lee et al. (2015) conducted a meta-analysis showing significant positive effects of drama-based pedagogy on various educational outcomes, while Deasy (2002) compiled evidence demonstrating the impact of arts education on academic and social skills.

Theater-based pedagogical techniques show promise in enhancing foundational skills through their capacity to portray reality or create alternative realities in a compelling and engaging manner. Recent neuroscientific research suggests that such pedagogy may have a significant impact on long-term learning processes, particularly in the hippocampus region of the brain (Greaves et al., 2022). This aligns with emerging findings in the field of neuroaesthetics, where researchers are gaining insights into how various art forms, including dance, visual arts, and music, influence brain function and cognitive processes (Omigie et al., 2014; Kirk et al., 2009). Supporting this, Ellen et al. (2013) argue that arts education can enhance cognitive skills that transfer to other domains, while Hardiman et al. (2019) demonstrate that arts-integrated pedagogy can lead to long-term retention of content. Furthermore, Duffy (2014) argue that drama-based interventions can enhance cognitive flexibility and creative problem-solving skills, which are crucial for academic success and social development.

These findings collectively suggest that theater-based pedagogical approaches have the potential to not only enhance academic learning but also contribute to the holistic development of students, preparing them to navigate complex social and emotional landscapes in their personal and academic lives.

5 Data Collection, Outcomes, and Hypotheses

5.1 Implementation Protocol

Based on the school's schedule and the students' availability, we obtained permission from each school head to conduct the baseline surveys. Before the commencement of the surveys the enumerators informed the students and parents about the study, and received signed consent forms from willing participants to document their wish to participate. In each school, we also surveyed one teacher who taught the grades that our sample is from (grade 6 through 8). Further details on the field team's composition and operations can be found in Appendix A.3.

5.2 Baseline Survey

The baseline survey was conducted between May and June 2024. During this period, we surveyed a total of 3,909 students across 96 schools. The survey includes a short demographic module followed by questions on well-being, empathy, self-reflection, self-efficacy, negotiation, conflict resolution, critical

thinking, public speaking, teamwork, time-management, and gender attitudes.

5.3 Administrative Data

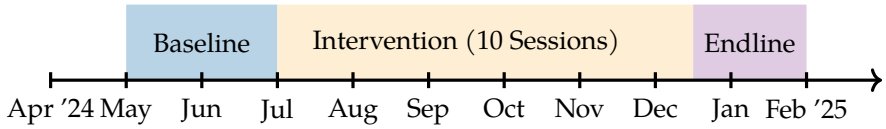
Our research team has secured approval from the District Magistrate to access administrative data from all schools in our sample. This data encompasses enrollment figures, attendance records, and test scores maintained by the school. The test scores include the total, as well as the subject-wise scores in half-yearly and annual exams conducted by the schools. This, along with past-year attendance records will be collected at the student level. The administrative data will supplement our survey-collected information, allowing for a more comprehensive analysis of students' academic performance and engagement.

5.4 Data on Facilitators

To explore the potential effects of individual differences among facilitators, we conducted a facilitators' survey prior to collecting baseline data from students. Facilitators completed this self-administered online survey after being selected to participate in the training session for the program. Participation in the survey was voluntary. It covered various aspects, including demographics, social characteristics, age, education, work experience, and any relevant training the facilitators might have received in the past. Additionally, the survey included questions related to behavior and personality traits. The complete survey instrument is included in A.5. Descriptive statistics for facilitators are provided in Appendix A6 (Table A8).

5.5 Endline Survey

We plan to conduct the endline survey in mid-December through January. The figure below provides the project timeline.



5.6 Outcomes

In this section, we discuss all our direct and downstream outcomes. For detailed definitions and measurement methods for these outcomes, see Appendix A.1. For the majority of our outcome measures, we take simple averages of the relevant components from their respective scales. For others, we use the methodology developed by Anderson (2008) to create indices. A detailed explanation of this index construction process is provided in Appendix A.2.

5.6.1 Direct Outcomes

To assess the effectiveness of the curriculum, we begin with measures that are specifically targeted by the program directly according to our theory of change (Figure 3).

Self Efficacy: To measure self-efficacy, we utilized the New General Self-Efficacy (NGSE) scale developed and validated by Chen et al. (2001). Self-efficacy, in this context, is defined as an individual's belief in their capacity to mobilize personal resources necessary to meet the demands of a specific situation. The NGSE is an 8-item instrument, with each item rated on a 5-point Likert scale ranging from 1 ("Strongly Disagree") to 5 ("Strongly Agree"). This scale was chosen to capture a general sense of perceived self-efficacy across various domains.

Self-Reflection: To measure self-reflection, we adapt the scale developed and validated by Grant et al. (2002). This construct encompasses two dimensions: engagement in self-reflection and need for self-reflection. The index is based on a 7-item scale, with each item evaluated on a 6-point Likert scale ranging from 1 ("Strongly Disagree") to 6 ("Strongly Agree"). It should be noted that Item 2 is reverse-coded to ensure consistency in the directionality of responses.

Emotion Regulation: To evaluate participants' emotion regulation abilities, we employed the Emotion Regulation Questionnaire for Children and Adolescents (ERQ-CA) developed by Gullone and Taffe (2012). Emotion regulation, in this context, encompasses the capacity to recognize, monitor, evaluate, and modify emotional reactions. The ERQ-CA is a 10-item instrument, with each item rated on a 5-point Likert scale ranging from 1 ("Strongly Disagree") to 5 ("Strongly Agree"). This scale is particularly valuable as it distinguishes between two key emotion regulation strategies: suppression

and reappraisal. The questionnaire comprises two sub-scales: suppression[2] and reappraisal[3]. By utilizing this validated measure, we aimed to measure participants' tendencies to use these distinct emotion regulation strategies, which can have significant implications for their psychological well-being and social functioning in educational settings.

Empathy: To measure participants' empathy towards others, we adapted the Interpersonal Reactivity Scale developed Davis et al. (1980). This multidimensional measure originally comprises four subscales: perspective taking, fantasy, empathic concern, and personal distress. The complete scale consists of 28 items, each rated on a 5-point Likert scale ranging from 0 ("Does not describe me well") to 4 ("Describes me very well"), with nine items (3, 4, 7, 12, 13, 14, 15, 18, and 19) reverse coded.

For our study context, we modified the questionnaire to focus specifically on the empathic concern and perspective taking subscales, resulting in a more concise 14-item scale.[4] This modification allows us to maintain the scale's core structure while adhering to time constraints.

Interpersonal Dynamics (Friendships and Bullying): To measure interpersonal dynamics, we employ a two-faceted approach focusing on friendships and bullying. Friendship is evaluated using three questions designed to capture both extensive and intensive margins of social relationships. For bullying, we adapt a five-item measure developed and validated by Olweus (1996) and further refined by Solberg and Olweus (2003) to ensure its suitability for our adolescent participants in this context. This comprehensive bullying assessment allows for a nuanced understanding of various aspects of peer victimization. In our analysis, each bullying item will be treated as a separate outcome to provide a detailed perspective on different facets of bullying experiences. The complete set of questions for both friendship and bullying measures is provided in Appendix A.1.

We also ask teachers about their observations on bullying and bystander behavior in the endline teacher surveys (Appendix Table A5).

Negotiation and Conflict Resolution: To measure negotiation skills, we developed two context-specific vignettes through extensive consultation with our field team. This approach ensures that the scenarios are culturally relevant and externally valid. Similarly, we employ two vignettes to evaluate conflict resolution abilities. These carefully crafted scenarios allow us to capture nuanced aspects of both

[2]We use items 2, 4, 6, and 9 from Gullone and Taffe (2012).
[3]We use items 1, 3, 5, 7, 8, and 10 from Gullone and Taffe (2012).
[4]This adaptation involved the removal of 14 items (specifically, items 1, 5, 6, 7, 10, 12, 13, 16, 17, 19, 23, 24, 26, 27) from the original scale used in Davis et al. (1980).

negotiation and conflict resolution skills within the study's local context. The complete set of vignettes used for measuring negotiation and conflict resolution skills is provided in Appendix A.1.

Communication Skills: To assess participants' communication skills, we employed two validated indices: the Active Listening Attitude Scale (ALAS) and the Public Speaking Anxiety Scale.

The ALAS, developed by Mishima et al. (2000) and Bybee and Frost (2017), evaluates active listening attitudes across three sub-scales: listening attitude, listening skill, and conversation opportunity. We adapted the original 31-item scale, focusing on the listening attitude and listening skill sub-scales due to time constraints. Our modified version comprises 13 items: seven from the listening attitude sub-scale[5] and six from the listening skill sub-scale[6]. Responses are recorded on a 4-point Likert scale (0 = "Disagree" to 3 = "Agree").

The Public Speaking Anxiety Scale, developed by Bartholomay and Houlihan (2016), measures cognitive, behavioral, and physiological aspects of speech anxiety. We shortened the original 17-item scale while maintaining representation across all three sub-scales. Our adapted version includes eight items: five from the cognitive anxiety sub-scale[7], two representing the behavioral anxiety sub-scale[8], and one composite item for the physiological anxiety sub-scale[9]. Responses are recorded on a 5-point Likert scale (1 = "Not at all" to 5 = "Extremely").

We convert the questions in both these scales to binary variables such that 1 depicts better communication skills, i.e. better listening attitudes skills and lesser public speaking anxiety. We then use the methodology proposed by Anderson (2008) to create the communication skills index. A detailed explanation of this index construction process is provided in Appendix A.2. These adaptations allowed us to comprehensively assess key aspects of communication skills while accommodating time constraints in our study design.

Furthermore, in the endline surveys we have added a question where students are asked to record audio responses to two prompts. The first is a short passage that is given to students to read aloud, and the other is to recall and speak about a happy incident (both in Hindi). We will apply context-validated machine learning methods to assess reading fluency and confidence, in collaboration with researchers

[5]We used items 3, 4, 6, 7, 8, 9, 10 from Mishima et al. (2000).
[6]We used items 2, 4, 5, 7, 10, 11 from Mishima et al. (2000), where item 11 in the listening skill scale is reverse-coded.
[7]We used items 1, 2, 5, 6, 7 from Bartholomay and Houlihan (2016).
[8]We used items 9, 12, 15, 17 from Bartholomay and Houlihan (2016).
[9]This encompassing original items 10, 11, 13, 14, 16 from Bartholomay and Houlihan (2016).

from the Indian Institute of Technology-Mumbai (Sabu and Rao, 2024; Vaidya et al., 2024; Sabu and Rao, 2020). These outcomes will give us more objective measures of communication skills which do not rely on self-reports. We have also added a question in which we ask students if they would be willing to sign up to give a short speech on their experience in school in a gathering attended by high-ranking government officials (head of the district administration). Details on these new questions are in Appendix Table A4.

Collaboration: To evaluate participants' willingness to collaborate, we ask two questions that capture different aspects of cooperative behavior in an academic setting. The first item, "I prefer tackling schoolwork on my own," assesses individual work preference, while the second, "I like working together on joint projects with my classmates," directly measures attitudes towards collaborative tasks. Both items are scored on a 5-point Likert scale, ranging from 1 ("Agree") to 5 ("Disagree"). This bidirectional approach allows us to gauge both positive inclinations towards collaboration and potential aversions to group work. By eliciting these complementary items, we construct a measure of collaborative tendencies that accounts for the multifaceted nature of student interactions in educational contexts. This provides a straightforward yet informative metric for assessing the impact of our intervention on students' collaborative dispositions.

A related but distinct aspect of collaborative behavior is the degree to which students cooperate with each other. As part of the endline survey, students engage in an incentivized prisoner's dilemma game following Alan et al. (2021). We will use their responses as an experimental measure of cooperation/ collaboration, in order to supplement the self-reported measures above. Table A4 contains implementation details.

Time Management: To evaluate time-management skills, we adapted The Time-Management Scale developed by Trueman and Hartley (1996), which comprises two sub-scales: daily planning and confidence in long-term planning. The original scale consists of 14 items, each rated on a 5-point Likert scale ranging from 1 ("Never") to 5 ("Always"), with higher scores indicating more effective time management efforts. Items 8, 10, 12, and 15 in the original scale are reverse coded.

For our study, we modified the questionnaire to better suit our context and adolescent population, resulting in a 7-item scale.[10] This modification allows us to maintain the scale's core structure while ensuring its suitability for our adolescent participants in this context while accommodating time

[10]This adaptation involved the removal of 7 items (specifically, items 1, 3, 5, 6, 8, 10, and 11) from the original scale used in Trueman and Hartley (1996).

constraints.

Critical Thinking: To measure critical thinking, we employ the measurement tools developed by Sosu (2013). These instruments were recently applied in the Turkish context by Alan and Mumcu (2024). This index is based on a 9-item scale, where each item is evaluated using a 4-point Likert scale. The scale ranges from 1 ("Completely Disagree") to 4 ("Completely Agree").

Gender Attitudes: To measure gender attitudes, we employ the Attitudes Towards the Roles and Rights of Women and Girls survey, previously utilized in the Indian context by Dhar et al. (2019). The original instrument comprises nine items designed to evaluate attitudes towards women and girls, each scored on a 4-point Likert scale ranging from 1 ("Strongly Disagree") to 5 ("Strongly Agree").

The scale enables us to capture nuanced perspectives on gender roles and rights among our sample population.

Student Engagement: While student engagement is not explicitly a direct outcome, some of the hypothesized impacts of the intervention may work through greater engagement, which is an important intermediary outcome.

To assess student engagement, we will collect both student self-reported measures and teacher observations at the endline. For the questions to the students, our measures are adapted from Skinner et al. (2009), which have been further validated for the Indian context by Bharti et al. (2024). This is a 5-item scale, each rated on a 5-point Likert scale ranging from 1 ("Strongly Disagree") to 5 ("Strongly Agree").[11]

We also ask questions on student behavior and engagement to the teachers through endline teacher surveys. Among other things, these questions ask teachers about the share of students they think are engaged, talkative, distracted, inquisitive, emotionally mature, or show leadership qualities. The teacher survey instrument is provided in the Appendix Table A5.

5.6.2 Downstream Outcomes

In addition to the outcomes targeted directly by the curriculum, our theory of change suggests there can be important impacts on several downstream outcomes. These include well-being, academic performance

[11] See Appendix Table A4 for the list of questions.

(test-scores), and aspirations. For detailed definitions, and measurement methods for these outcomes, see Appendix A.1.

Well-being: To evaluate overall well-being, we employed the BBC Well-being Scale, a comprehensive measure that encompasses three sub-scales: psychological well-being, physical health and well-being, and relationships (Kinderman et al., 2011). The original scale consists of 24 items, each rated on a 5-point Likert scale ranging from 1 ("Not at All") to 5 ("Extremely"), with item 4 reverse coded. For our study and context, we adapted the questionnaire to be more appropriate for adolescents, resulting in a 15-item questionnaire.[12] This modification allows us to maintain the scale's core structure while ensuring its suitability for our adolescent participants in this context.

To measure participants' sleep patterns, we collected data on both the quality and quantity of sleep using two targeted questions. The first question evaluated sleep quality by asking, "How often has poor sleep troubled you in the last month?" with response options ranging from "Always" to "Never" on a Likert scale. This item aimed to capture the frequency of sleep disturbances over a month-long period. We first encode it as a binary variable being 0 if the response is "rarely" or "never", and 1 otherwise. The second question addressed sleep quantity by asking, "How many hours of sleep did you get last night?" with possible responses ranging from 1 to 15 hours. This is also encoded as a binary being 1 if the reported hours of sleep was at least 6, and 0 otherwise. This question provided a snapshot of recent sleep duration. Recent research in sleep science shows implications of insufficient sleep on cognitive and physiological function, productivity, decision making, or well being (Rao et al., 2021; Bessone et al., 2021). Finally, we combine the well-being sub-indices with sleep outcomes following the methodology proposed by Anderson (2008). A detailed explanation of this index construction process is provided in Appendix A.2.

Academic Performance: To assess academic performance, we will collect official school records, self-reported data, and student administered test using ASER: Annual Status of Education Report.[13] Specifically, we will collect official test scores for each student at the end of the academic year, providing an objective measure of scholastic achievement. Additionally, we will obtain official attendance register data from the schools. To complement this administrative data, we will also collect self-reported information from students regarding their absences in the previous week. Second, we will also collect

[12] This involved removing 9 items (specifically, items 3, 5, 11, 12, 16, 19, 21, 23, and 24) from the original scale Kinderman et al. (2011).

[13] Annual Status of Education Report (ASER) is a nationwide household survey that captures the status of children's enrollment and learning outcomes in rural India every year.

self-reported data on punctuality. Finally, we have added Mathematics questions from ASER: Annual Status of Education Report in the endline on subtraction, division, and number recognition (see Table A4). This combination of official records, self-reported data, and student administered test aims to provide a comprehensive view of students' academic performance.

Aspirations: To assess aspirations, we ask two questions: (1) What is the highest level of education you would like to complete if finances and opportunity of the school/college are available? Response: 1 = "upper primary/middle" to 8 = "postgraduate and above"; and (2) Suppose you were to get married right after school, would you want to continue your education after marriage? Response: 1 = "Strongly Disagree" and 5 = "Strongly Agree". We borrow this from Fiala et al. (2022).

In the endline surveys we also ask students additional questions on aspirations. These include jobs they aspire to, intention to migrate, and questions on the barriers to aspirations (economic resources, family, gender/caste prejudice, barriers that stem from their sense of self, and so on).

6 Empirical Strategy

6.1 Reduced-Form Specification

We use the following intent to treat (ITT) specification for the main analysis:

$$Y_{i,t=1} = \beta_0 + \beta_1 T_i + \beta_2 Y_{i,t=0} + \beta_3 X_i + e_{it}$$

where $Y_{i,t=1}$ is the outcome variable of student i measured at the endline, T_i is an indicator that the student was assigned to the Theater Curriculum, $Y_{i,t=0}$ is the outcome variable measured in the baseline and X_i is the vector of controls. We will choose controls by post-double-selection LASSO. Standard errors are clustered at the school level, which is the unit of randomization.[14]

We evaluate the heterogeneous treatment effects based on respondents' gender, and socio-economic status. This is of particular importance, as significant differences in learning outcomes between girls and boys have been documented (Census, 2011).

[14] In case the outcomes are collected only at the endline, we estimate the above equation without including $Y_{i,t=0}$.

6.2 Multiple Hypotheses Testing

For all our direct outcome variables, we form indices as detailed in the Appendix A.2. We will also correct for multiple hypotheses testing by using adjusted p-values for the false discovery rate (FDR) among groups of outcomes and report the resulting q-values (Benjamini and Heller, 2007). Our adjustments for multiple hypotheses testing will apply within direct outcomes.

6.3 Addressing Attrition

We will closely monitor attendance by recording which students attend each session of the intervention. This detailed tracking will allow us to control for session participation (treatment intensity) when analyzing the data. Since the intervention is integrated into the school's regular activities and our survey protocol involves multiple visits, we anticipate minimal attrition from the overall study. Additionally, we also have regular school attendance and enrollment data from both treatment and control schools. Should we find differential attrition across treatment and control, we will apply Lee bounds to correct for attrition (Kremer et al., 2009; Baird et al., 2011; Drexler et al., 2014; Fiala et al., 2022). Lee bounds rely on a monotonicity assumption, which states that assignment to treatment can only affect attrition in one direction. While we expect this assumption to hold, we can also employ alternative methods, such as those outlined in Molina Millán and Macours (2017), if needed.

6.4 Addressing Outcomes with Limited Variation

If some variables present limited variation, we will conduct the following steps. First, we will assess if such limited variation implies that 95 percent of observations have the same value within the treatment group. If so, we will omit this variable from the analysis–including all index measures. If these decisions result in excluding all variables that form an index, we will exclude the index from the evaluation.

6.5 Addressing Potential Null Results

It is plausible that some outcomes are less likely to be impacted by the intervention. As the section on theory of change above had outlined, certain outcomes are directly targeted by the intervention sessions, while others represent downstream effects. Consequently, we expect positive impacts to be

more pronounced for directly targeted outcomes compared to downstream outcomes such as test scores, aspirations, and well-being.

Moreover, the intensity of the treatment, measured by the number of sessions that directly or indirectly target specific outcomes also varies. For instance, communication, collaboration, and networking/friendships are influenced through multiple sessions across the curriculum, due to the pedagogical approach and the interconnected nature of the sessions. In contrast, outcomes like time management are primarily addressed in a single session (Session 5 on goal-setting and SWOT analysis).

An important consideration, therefore, is the analysis plan to explore the potential null results further. We will have several measures of student engagement and our teacher surveys in the endline will also give us rich data on teacher characteristics and their familiarity and opinions on our intervention. This is in addition to facilitator data (see Appendix Table A8). We propose to explore heterogeneity across student engagement, teacher characteristics and facilitator characteristics (education, age, and gender).

We also propose to implement Chernozhukov et al. (2018) machine learning methods to identify relevant margins of heterogeneity. The estimating equation will be:

$$Y_i = \lambda + \delta' D_i + \gamma(D_i \times Z_i) + \beta_z Z_i + \sum_j \beta'_j X_{ji} + \epsilon_i^m$$

where Z_i is the relevant dimension of heterogeneity we test, and γ is the coefficient of interest when we expect heterogeneous treatment effects.

6.6 Addressing other Potential Concerns

One potential concern is the possibility of cross-contamination, where students from different schools might interact and influence each other's behaviors or responses, or even dropping out of one school and joining the other. However, given the local terrain and infrastructure, it is unlikely that students will switch schools, as they typically attend the nearest school. Furthermore, since the entire intervention is conducted within a single academic year, the likelihood of students transferring between schools during the study period is minimal. Nevertheless, we will monitor the sample set for any additions or dropouts of students to ensure that our results are not biased by changes in the study population.

7 Administrative Information

7.1 Funding

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7.2 Institutional Review Board Approval

Institutional Review Board approval for this study was granted by DAI Research and Advisory Services (approval number: IRB: 0001276) and Northeastern University (approval number: IRB: 24-08-01).

7.3 Declaration of Interest

The authors declare that they have no known competing financial or other interests that could have influenced the work reported in this paper.

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7.5 Declaration of Generative AI and AI-assisted Technologies in the Writing Process

During the preparation of this manuscript the authors used Claude.AI in order to improve grammar and come up with this creative title. After using Claude.AI, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication.

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A Appendices

A.1 Outcome Variables

Appendix Table A1: Direct Outcomes

Outcomes	Definition
Self Efficacy	*Response Options: 1 - Strongly disagree; 5- Strongly agree* 1. I will be able to achieve most of the goals that I have set for myself. 2. When facing difficult tasks, I am certain that I will accomplish them. 3. In general, I think I can obtain outcomes that are important to me. 4. I believe I can succeed at most any endeavour to which I set my mind. 5. I will be able to successfully overcome many challenges. 6. I am confident that I can perform effectively on many different tasks. 7. Compared to other people, I can do most tasks very well. 8. even when things are tough, I can perform quite well.
Self Reflection	*Response Options: 1 - Strongly disagree; 6 - Strongly agree* 1. I frequently take time to reflect on my thoughts 2. I am not really interested in analysing my behaviour (-) 3. It is important for me to evaluate the things that I do 4. I am very interested in examining what I think about 5. It is important for me to try to understand what my feelings mean 6. I have a definite need to understand the way that my mind works 7. It is important for me to be able to understand how my thoughts arise
Emotional Regulation	*Response Options: 1 - Strongly disagree; 5- Strongly agree* 1. When I want to feel happier, I think of something different. 2. I keep my feelings to myself. 3. When I want to feel less bad (e.g., sad, angry or worried), I think about something different. 4. When I am feeling happy, I am careful not to show it. 5. When I am worried about something, I make myself think about it in a way that helps me feel better. 6. I control my feelings by not showing them. 7. When i want to feel happier about something, I change the way I'm thinking about it. 8. I control my feelings about things by changing the way I think about them. 9. When I'm feeling bad (e.g., sad, angry or worried) about something, I'm careful not to show it. 10. When I want to feel less bad (e.g., sad, angry or worried) about something, I change the way I'm thinking about it
Empathy	Note 1: EC - Empathetic Concern; PT - Perspective Taking Note 2: (-) denotes items scored in reverse fashion

Response Options: 0 - Does not describe me well; 4 - Describes me very well
Response Options(-) : 4 - Does not describe me well; 0 - Describes me very well

1. I often have tender, concerned feelings for people less fortunate than me. (*EC*)
2. I sometimes find it difficult to see things from the "other guy's" point of view. (*PT*) (-)
3. Sometimes I don't feel very sorry for other people when they are having problems. (*EC*) (-)
4. I try to look at everybody's side of a disagreement before I make a decision. (*PT*)
5. When I see someone being taken advantage of, I feel kind of protective towards them. (*EC*)
6. I sometimes try to understand my friends better by imagining how things look from their perspective. (*PT*)
7. Other people's misfortunes do not usually disturb me a great deal. (*EC*)(-)
8. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments. (*PT*) (-)
9. When I see someone being treated unfairly, I sometimes don't feel very much pity for them. (*EC*) (-)
10. I am often quite touched by things that I see happen. (*EC*)
11. I believe that there are two sides to every question and try to look at them both. (*PT*)
12. I would describe myself as a pretty soft-hearted person. (*EC*)
13. When I'm upset at someone, I usually try to "put myself in his shoes" for a while. (*PT*)
14. Before criticizing somebody, I try to imagine how I would feel if I were in their place. (*PT*)

Interpersonal Dynamics (Friendships and Bullying)

[*number*]
1. How many friends do you have?

[*0-7 days*]
2. How often do you talk to your friends in a given week (outside of school)?

[*0-7 days*]
3. How often do you meet your friends in a given week (outside of school)?

Response Options: "It hasn't happened to me in the past three months; Only once or twice; 2 or 3 times a month; About once a week; Several times a week
4. How often have you been bullied at school in the last three months?

Response Options: Verbally; Physically; Mentally; Others (Specify)
5. How were you bullied?

Response Options: Almost never; Once in a while; Sometimes; Oftern; Almost always
6. How often do other pupils try to put a stop to it when a pupil is being bullied at school?

Response Options:
I have never noticed that pupils my age have been bullied
I take part in the bullying
I don't do anything, but I think the bullying is OK
I just watch what goes on

I don't do anything, but I think I ought to help the bullied pupil
I try to help the bullied pupil in one way or another
7. How do you usually react if you see or understand that a pupil your age is being bullied by other pupils?

Response Options:
I haven't bullied another pupil(s) at school in the past 3 months
It has only happened once or twice
2 or 3 times a month
About once a week
Several times a week
8. How often have you taken part in bullying another pupil(s) at school in the last three months?

Negotiation and Conflict Resolution

We use four vignettes, two each for measuring conflict resolution and negotiation.

Conflict Resolution

Vignette: "In a joint family, Priya wants to study in Delhi for her higher education, but her parents prefer that she stays close to home. The family must come to a decision that respects everyone's views."
What do you think Neha should do in this situation?
A. Priya should give up her dream without trying to convince her family
B. Priya should present a well-researched plan showing the benefits of studying in Delhi.
C. Priya should secretly apply to universities in Delhi and deal with the consequences later.
D. Priya should fight back, arguing with her family about going to Delhi University.

Vignette: "Neha and Aisha are the two most popular children in class. Both want to be the class representative, but only can be elected. They need to find a way to decide who will take on the role without causing a rift in their friendship."
What do you think Neha should do in this situation?
A. Neha should let Aisha have the role
B. Aisha and Neha should decide to co-represent the class and share
C. Neha should campaign against Aisha to try and win over their classmates
D. Neha should ask Aisha to step down

Negotiation

Vignette: "Ankit's dream is to work in the hotel industry, but his parents are pressuring him to focus on joining the army, which they believe offers more security."
What should Ankit do in this situation?
A) Ankit should apply to the army
B) Ankit should apply for the army, but also convince his parents to let him apply to a job at a hotel in case the army does not work out
C) Ankit should only apply to the hotel job, and tell his parents he does not want to join the army

Vignette: "Sunita is passionate about YouTube and vlogging and wants to start her own YouTube channel. Her parents are supportive but worried about her academic performance."
What should Sunita do in this situation?

A) Sunita should give up the plan to start her own YouTube channel and focus on her studies.
B) Sunita should start her channel, understanding the risks of neglecting her studies
C) Sunita should propose a schedule to her parents that allows time for both YouTube and studying
D) Sunita should argue with her parents until they relent.

Communication Skills*

We use the Active Listening Attitudes Scale (ALAS) and the Public Speaking Scale

Active Listening Attitudes Scale

Response Options: 1 - Agree; 4 - Disagree

1. I listen to the other person calmly, while he/she is speaking.
2. I listen to the other person, putting myself in his/her shoes.
3. I sometimes give the other person a brief summary of what he/she has said.
4. I tend to listen to others seriously.
5. I'm aware of my own feelings, while I'm listening to others.

Public Speaking Anxiety Scale

Response Options: 1 - Not at all; 5 - Extremely

1. Giving a speech is terrifying.
2. I am afraid that I will be at a loss for words while speaking.
3. I am worried that my audience will think I am a bad speaker.
4. I am focused on what I am saying during my speech. (-)
5. I am confident when I give a speech. (-)
6. My hands shake/feel sick/feel tense/fidget/heart pounds/sweat/ voice trembles when I give a speech (any of these).
7. I feel relaxed while giving a speech. (-)
8. I do not have problems making eye contact with my audience. (-)

Collaboration

Response Options: 1 - Disagree; 5 - Agree

1. I prefer tackling schoolwork on my own. (-)
2. I like working together on joint projects with my classmates.

Time Management

Daily planning subscale

Response Options: Always; Mostly; Sometimes; Infrequently; Never

1. Do you plan each day before you start it, for example, by making a schedule of activities you have to do?
2. Do you plan each day before you start it, for example, by making a schedule of activities you have to do?

Confidence in long-term planning subscale

Response Options: Always; Mostly; Sometimes; Infrequently; Never

3. Do you set and keep priorities?
4. Do you believe that there is room for improvement in the way you manage your time?
5. Do you have a set of goals for the entire term?
6. Are you still working on a major assignment the night before it is due?

	7. Do you regularly review your homework and classwork, even when a test is not imminent?
Critical Thinking	*Response Options: 1 - Completely Disagree; 4 - Completely Agree* 1. When facing a problem, I try to think of its cause. 2. I don't believe in things easily. 3. I use more than one source to find out information. 4. I am often on the lookout for new ideas. 5. I sometimes find a good argument that challenges some of my firmly held beliefs. 6. It's important to understand other people's viewpoint on an issue. 7. I don't believe every piece of information unless I research it myself. 8. I usually check the credibility of the source of information before making judgements. 9. I usually think about the wider implications of a decision before taking action.
Gender Attitudes	*Response Options: 1 - Strongly disagree; 5- Strongly agree* 1. A woman's most important role is being a good homemaker. 2. A man should have the final word about decisions in his home. 3. A woman should tolerate violence to keep her family together. 4. Boys should get more opportunities/resources for education. 5. Men and women should get equal opportunities in all spheres of life. 6. Girls should be allowed to study as far as they want. 7. Daughters should have a similar right to inherited property as sons. 8. It would be a good idea to elect a woman as the village Sarpanch. 9. Wives should be less educated than their husbands.

Note: Items marked with (-) are reverse coded.

*Index created as per steps listed in A.2

Appendix Table A2: Downstream Outcomes

Outcomes	Definition
Well-Being*	*Note:* *PHY - Included in the Physical health and well-being sub-index* *PSY - Included in the Psychological well-being sub-index* *REL - Included in the Relationship well-being sub-index* *Response Options: 1 - Not at all; 5 - Extremely* 1. Are you happy with your physical health? (*PHY*) 2. Do you feel depressed or anxious? (*PSY*) (-) 3. Do you feel you have a purpose in life? (*PSY*) 4. Do you feel optimistic about the future? (*PSY*) 5. Do you feel in control of your life? (*PSY*) 6. Do you feel happy with yourself as a person? (*PSY*) 7. Are you happy with your looks and appearance? (*PSY*) 8. Do you feel able to do the things you choose to do? (*PSY*) 9. Do you feel able to grow and develop as a person? (*PSY*) 10. Are you happy with yourself and your achievements? (*PSY*) 11. Are you happy with your friendships and personal relationships? (*REL*) 12. Are you comfortable about way you relate connect with others? (*REL*) 13. Are you able to ask someone for help with a problem? (*REL*) 14. Are you happy with your opportunity for exercise/leisure? (*PHY*) *Response options: 1- Always; 5- Never* 1. How often has poor sleep troubled you last month? [*1-15 hours*] 2. How many hours of sleep did you get last night?
Academic Performance	[*0-7 days*] 1. In the last week (school week), how many days were you absent from school? 2. In the last week (school week), how many days were you late to school? Note: We will complement this by utilizing test scores and attendance records supplied by the schools.
Aspirations	*Response Options: Middle (upto class 8); Matric(class 10); Higher Secondary (class 12); Graduate; Post graduate; Professional/Higher research degrees* 1. What is the highest level of education you would like to complete if finances and opportunity of the school/college are available? *Response Options: 1 - Yes; 0 - No* 2. Suppose you were to get married right after school, would you want to continue your education after marriage?

Note: Items marked with (-) are reverse coded.

*Index created as per steps listed in A.2

Appendix Table A3: Questions on Child Demography

Outcomes	Definition
Child's grade	*Response options* Which class are you in? (Integer options)
Time taken to reach school	*Integer options* How much time does it take to commute to school? (in minutes)
Social desirability index	*Response Option: 1 - Definitely false; 5 - Definitely true* 1. I am always courteous, even to disagreeable people. 2. There have been occasions when I took advantage of someone. 3. I sometimes try to get even rather than forgive and forget. 4. I sometimes feel resentful when I don't get my way . 5. No matter who I am talking to, I am always a good listener.
Number of household members	*Integer* List the total number of members in your household
Part of a sibling household	*Integer* How many siblings do you have?
Household assets	*Multiple select response choices:* *Colour TV, Mobile phone, Bicycle, Fan, Fridge, Motorcycle/ Scooter, Cooler, Car, Air Conditioner (AC), Washing Machine, Computer/Laptop, Internet, Gas Stove (LPG), Invertor/ Electric Generator, Sofa,* 1. Which of the following things does your family have at home?
Parent's education	*Response choices:* *Not literate, Literate without any schooling, Literate without formal schooling, TLC/AEC, Literate with formal schooling: below primary (be, Primary (5), Upper primary/middle (8), Secondary (10), Higher secondary (12), Diploma/certificate course (upto secondary), Diploma/certificate course(higher secondary), Diploma/certificate course(graduation & above), Graduate, Post graduate and above, Others* 1. Mother/guardian's education 2. Father/guardian's education
Parent's Occupation	*Response choices* *Working for pay in the public sector, Working for pay in the private sector, Working in family farming. animal rearing or fishing activities, Working in non farm family business, Taking care of the household or family, Studying or training, Looking for work, Doing unpaid voluntary, community, village or charity work, Retired or pensioner, With a long-term illness, injury or disability, Daily wage labourer, Other* 1. Mother/guardian's education 2. Father/guardian's education

NOTE: For the purpose of analysis, we generated dummy variables for multiple choice questions.

Appendix Table A4: Additional questions added in the endline survey

Outcomes	Definition
Barriers to Aspirations	1. What job would you like to do when you grow up? *Army, Doctor, Engineer, Teacher, Lawyer, Vlogger, Hotel owner, Homemaker Other(Specify)* 2. Do you intend to migrate immediately after high school? *No; Yes, for higher education; Yes, for marriage; Yes, for job* *Response options for items 3-7: Very much, Somewhat, Very little, Not at all* 3. Do you think economic resources could be an obstacle in the achievement of your educational aim? 4. Do you think the needs and ideas of your family could be an obstacle in the achievement of your educational aim? 5. Do you think gender/caste prejudice could be an obstacle in the achievement of your educational aim? 6. Do you think not feeling up to the standards could be an obstacle in the achievement of your educational aim? 7. To what extent, do you think, decisions about your career are under your control?
Language	*The students were asked to read aloud and record their voices on the survey tablet provided to each of them.* 1. Press the record button, and read out the passage that appears on the screen/on the paper provided to you *Passage* (*Given to students only in Hindi*): सोमेश और कण्व रास्ते पर जा रहे थेI रास्ते के किनारे स्थित छोटे बगीचे में फूल खिले हुए थे। फूलों की सुगंध से सारा रास्ता महक रहा था। यह देखकर सोमेश ने कहा -'इसमें से थोड़े फूल मुझे मिल जाते तो मैं उन्हें अपनी बीमार बहन को दे देता और वह बहुत प्रसन्न होती।' यह सुनकर कण्व ने कहा -' तो तोड़ क्यों नहीं लेते? तुम्हारा हाथ न पहुँचता हो तो लाओ मैं तोड़ दूँ, मैं तुझसे लंबा हूँ।' सोमेश ने कण्व का हाथ पकड़कर कहा - नहीं - नहीं! 'ऐसा मत करना। चोरी करना बहुत बुरी बात है। मैं बगीचे के मालिक से माँग लूँगा।' बगीचे के मालिक ने मित्रों की बात सुन ली, वह सोमेश के विचार जानकर बहुत खुश हुआ, उसने कुछ सुंदर सुगंधित पुष्प सोमेश को उपहार में दे दिये।

English translation of the passage for reference:
Somesh and Kanva were walking on the road. Flowers were blooming in the small garden situated on the side of the road. The entire road was smelling of the fragrance of the flowers. Seeing this, Somesh said - 'If I could get some of these flowers, I would give them to my sick sister and she would be very happy.' Hearing this, Kanva said - 'Then why don't you pluck them? If your hands are not able to reach, then let me pluck them, I am taller than you.' Somesh held Kanva's hand and said - No-no! 'Don't do this. Stealing is a very bad thing. I will ask the owner of the garden.' The owner of the garden heard the friends, he was very happy to know Somesh's thoughts. He gifted some beautiful fragrant flowers to Somesh.

2. Recall a happy incident. What was it about the incident that made it nice? How did you feel during the event?Press the record button and share your experience.

Cooperation

Incentivised Prisoner's Dilemma Game

Instructions for surveyors:

Hand out two playing cards - one black, one red - to each of the students. Read out these instructions:

1. We are going to play a card game in which everyone will be matched with someone else from this class.
2. I will now give each of you a pair of playing cards, one red (Hearts or Diamonds) and one black card (Clubs or Spades). The number of faces on the cards will not matter, just the colour.
3. You will be asked to play one of these cards by holding it to your chest/playing it face down on the desk (so we can see that you have made your decision, but not what that decision is).
4. Your earnings are determined by the card that you play and by the card played by the person matched with you. Write on the board:

a. If you and both play your red card, you will each earn 2 candies.

b. If you both play your black card, you will each earn 3 candies.

c. If you play your black card, and the other person plays his/her red card, then you earn 0 and the other person earns 5 candies.

d. If you play red, and the other person plays black, then you earn 5 candies and the other person earns zero.

Draw the following payoff matrix on the blackboard:

You	Your Partner
Red (2)	Red (2)
Black (3)	Black (3)
Black (0)	Red (5)
Red (5)	Black (0)

5. We will play it only once, so pay attention!

When the students have played their cards, announce the random pairing, and the realized payoffs.

Questions to students:

1. Which card did you play?
2. Which card did your partner play?
3. Notice that if you play black and partner plays black you earn 6 candies together, but you have to be sure that your partner will also play black when you play black. How many people in this class will cooperate with you in this game?

Mathematics

Subtraction

1.

$$\begin{array}{r} 41 \\ -\ 15 \\ \hline \\ \hline \end{array}$$

2.

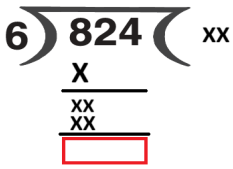
$$\begin{array}{r} 31 \\ -\ 18 \\ \hline \\ \hline \end{array}$$

If both the subtraction questions above are answered correctly, these questions on division are presented along with the attached images.

Division

2.a. Perform the following division task, and enter the **quotient** in the box below.

2.b. Perform the following division task, and enter the **remainder** in the box below.

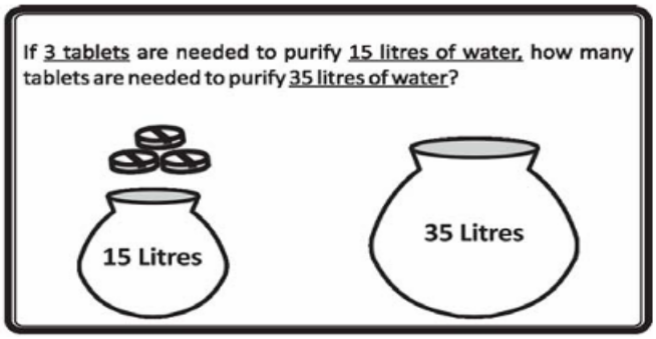


If any of the subtraction questions are answered incorrectly, then 5 questions of the type mentioned below are presented to the students.

Number Recognition

3. Mark all the numbers lesser/greater than **XX** (**a 2-digit number**).
4. Mark all the numbers lesser/greater than **X** (**a 1-digit number**).

The following questions section appears only for students of grade 7 and 8, and only if they answered both the division problems correctly:

Beyond Basics	1.  2. 
	Note: In this section, the question marked with [*C*] *is asked to control school participants only. The rest are asked to participants in all schools* (*treatment and control*).
School Activities	1. Do you have an interest in arts or theatre? *Response options: 1- Very interested, 5 - Not at all interested* 2. In the last month how many Physical Education classes have you attended? 3. In the last month how many well-being classes have you attended?
Public Speaking	Would you sign up to give a short speech on "Your School Experience" in front of the District Magistrate of Champawat on January 26th (Republic Day)? If yes, enter your name below to sign up.
Student Engagement	Below are a few statements. Please select the extent to which you disagree or agree with them. *Response options: 1 - Strongly disagree, 5 - Strongly agree* 1. I try to do well in school. 2. In class, I work as hard as I can. 3. When I am in class, I participate in class discussions. 4. I pay attention in class. 5. When I'm in class, I listen carefully.
Program Awareness	1. Have you heard of Rang Shaala from any of your friends?[*C*]
Program Implementation	*Note: Question in this section are only presented to* ***treatment school participants***
	1. Did you attend any theatre-based sessions? [*Yes/No*] 2. How many sessions did you attend? [*If 1 = "Yes"*] 3. Rate your average experience during those sessions on a scale of 1 to 5, where 1 is Excellent and 5 is Very Bad. [*If 1 = "Yes"*]

4. Do you know the name of any Rang Shala facilitator? [*Yes - Enter their name/No*]
5. Would you recommend the Rang Shaala curriculum to your friends? [*Yes/No*]
6. Did you talk about the curriculum/sessions to your friends? [*Yes/No*]
If yes please enter: School name, friend's name

7. Did you talk about the curriculum/sessions to your friends? [*Yes - who?/No*]
8. Which aspect(s) of the sessions did you enjoy/like a lot?
9. Which aspect(s) of the session did you not enjoy?

How strongly do you agree/disagree with the following statements.
Strongly Disagree - Strongly Agree
10. The facilitator made me feel confident.
11. I look up to my facilitator as a role model.

How often did the following things happen in your session?
Every Session, Most of the sessions, Some sessions, Hardly in any of the sessions, Never
12. The facilitator showed an interest in every student's participation
13. The facilitators did energisers and activities involving body movements
14. The facilitator made me aware of issues that I did not know about before
15. The facilitator made me feel happy
16. The facilitators discussed the sessions' objectives at length

Appendix Table A5: Teachers' Survey

Outcomes	Definition
Demography	
	1. Which social category do you belong to? *Response options:* *General* *Schedule Caste/Schedule Tribe* *Other Backward Caste* *Do not want to respond*
	2. Gender
	3. Age
Educational Qualifications	
	1. What is the highest level of academic qualification you received? *Response options:* *Below secondary* *Secondary* *Higher secondary* *Graduate* *Post Graduate* *M. Phil* *PhD* *Post-doctoral*
	2. What is the highest level or professional qualification you received? *Response options:* *Diploma or certificate in basic teachers' training* (*not less than 2 years*) *Bachelor of Elementary Education* *Bachelor of Education or equivalent* *Master of Education or equivalent* *Diploma/Degree in special education* *None* *Other*
	3. For the highest degree, what was your major? *Response options:* *Science* *Arts* *Business and/or economics* *Engineering and/or computer science* *Education* *Other, specify*
Teaching Experience	1. In which year did you start teaching this school? 2. Up to now, how many different public schools have you taught (not including this one)? 3. What is the total number of years you have taught in public schools (not including this one)? 4. Up to now, how many different private schools have you taught at?

	5. What is the total number of years you have taught in private schools? 6. Which of following factors influenced your decision to become a teacher? *Response options:* *Teaching offered a steady career path* *Teaching was a secure job (reliable source of income)* *The teaching schedule fits with the responsibilities in my personal life* *Teaching allows me to influence the development of children and young people* *It is a respectable profession* *I was inspired by my parents or other close family members to become a teacher* *I enjoy teaching* *Opportunity for private tuition for extra income* *Other, specify* 7. On a scale of 1 - 5, how satisfied are you with your job? *Response options: 1 - Very satisfied, 5 - Very dissatisfied* 8. In the academic year 2023-2024, which subjects did you teach? 9. In the academic year 2024-2025, which subjects have you been teaching? 10. In the academic year 2024-2025, which classes have you been teaching?
Teaching Activities	In your teaching, to what extent can you do the following: *Response options Q1-Q5: Not at all, To some extent, Quite a bit, A lot* 1. Get students to believe that they can do well in their school work 2. Motivate students who show low interest in school work 3. Help students think critically (spotting the problem, breaking it down, checking for reasons, evaluating various solutions, etc.) 4. Provide an alternative explanation, for example when students are confused 5. Support student learning through the use of digital technology 6. I do a variety of things to help my students' socio-emotional learning (student discussions, speaking about social issues, conduct reflective sessions, etc.) *Response options: Agree a lot, Agree a little, Disagree a little, Disagree a lot* 7. I explain a topic again when my students don't understand *Response options: Agree a lot, Agree a little, Disagree a little, Disagree a lot* 8. How often do you conduct small tests to grade/mark/rank students? *Response options: Monthly, Once in 2 months, Quarterly, Half-yearly* 9. How often do you meet with parents of students? *Response options:* *In a usual parents-teacher meeting* *I sometimes call a student's parents if he/she is not doing well academically or otherwise* *We never have any parents-teachers meeting* *Not at all*
Bullying	1. How often have you witnessed students bullying each other at the school in the last month? *Response options: It hasn't happened in the past month, Only once or twice, 2/3 times a month, About once a month, Several times a week* 2. How often do other pupils try to put a stop to it when a pupil is being bullied at school? *Response options: Almost never, Once in a while, Sometimes, Often, Almost Always*

Student Engagement	1. In the last week, what percent of students in your class do you think engage deeply with the material taught in class? (0-100) 2. In the last week, what percent of students in your class do you think get distracted in class? (0-100) 3.In the last week, what percent of students in your class do you think are talkative? (0-100) 4. In the last week, what percent of students in your class ask doubts regularly? (0-100) 5. What percent of students in your class do you think are great leaders? (0-100) 6. What percent of students in your class are emotionally mature (dealing with conflicts, losses in life, understanding the perspective of others)? (0-100)
Awareness about SEL Curriculum & Theater-based Pedagogy	1. How aware are you about an SEL curriculum? *Response options:* *Fully aware* *Aware* *Not aware* *Fully not aware* 2. How aware are you about theater based pedagogy? *Response options:* *Fully aware* *Aware* *Not aware* *Fully not aware* 3. Do you know of any programs being run in schools which focuses on these aspects? (Yes/no)(If yes:) 3.a. How aware are you about this program? *Response options: Fully aware - Fully unaware* 3.b. What do you think the program is about? *Response options, multiple select:* *Computer training* *Team building exercises* *Grammar* *Goal setting* *Emotional awareness* *Simple science experiments* *Group discussions* *Career guidance* 4 Have you tried adopting an alternative/fun pedagogy to your teaching in this academic year?
Program Awareness in Treatment Schools	There was a program called Rang-Shaala being implemented in this school for the past few months. 1. How aware were you about this program? *Response options:* *Fully aware – knows about the motivation, contents and structure of the program*

Aware – knows a little about the motivation of the program, but not about the exact contents or structure
Not aware – has heard about the program, but is not aware of any of the detail
Fully unaware – has not heard of the program

Program Engagement in Treatment Schools

How frequently would you do the following?
Response options:
Never
Almost never
Occasionally
Almost every time
Every time

1. Ask students about the Rang-Shaala session.
2. Attend or briefly check-in on the session in person.
3. Ask the RangShaala facilitators about their session.
4. Help the facilitators in managing the class.

Unintended Spillovers in Treatment Schools

1. How aware are you about the pedagogy used in the sessions?
Response options:
Fully aware
Aware
Not aware
Fully not aware

2. How effective do you think the pedagogy is?
Response options:
Very effective
Somewhat effective
Undecided
Somewhat ineffective
Very ineffective

3. Have you tried adopting in your own classes any of the pedagogical methods/tools used by the facilitators?
Yes, No

4. How aware are you about the contents used in the sessions?
Response options:
Fully aware
Aware
Not aware
Fully not aware

5. What do you think are some of the topics being covered in the sessions?(Select all that apply)
Response options, multiple select:
Computer training
Team building exercises
Grammar
Goal setting

Emotional awareness
Simple science experiments
Group discussions
Career guidance

A.2 Steps for Index Construction

We follow the methodology proposed by Anderson (2008) to create variance-weighted indices.[15] For this purpose, we use the Stata module SWINDEX by Schwab et al. (2021).

The outcome variables are comprised of several individual questions (usually 5-point Likert scale or Agree/Disagree scale). We aggregate these individual questions and create an index by taking the weighted-average value of these individual variables. The weights are constructed by normalizing the variables such that they have same standard deviation and following Anderson (2008), the weights from the inverse covariance matrix is recovered.

Following process is followed by Anderson (2008) for index construction:

(i) For all variables, the positive direction always indicates a more "positive" outcome. We recode all the variables for which the scale was reversed in the original question, such that a higher value continues to indicate a more environment friendly outcome.

(ii) For questions that used a 5-point Likert scale, a corresponding binary variable is created. This binary variable is coded as 1 if the respondent answered "Strongly Agree" ("Strongly Disagree") or "Agree" ("Disagree") for a question containing an environmentally progressive (regressive) statement, and 0 otherwise.

(iii) Standardization of each individual variable takes place by demeaning the variables and subsequently dividing them by the control group standard deviation. We create standardized variables $(\tilde{y})$ using this process.

(iv) Compute covariance matrix $\widehat{\sum}$, which consist of elements:

$$\sum_{mn}^{\wedge} = \sum_{i=1}^{Nmn} \frac{(y_{im} - \bar{y}_m)}{\sigma_m^y} * \frac{(y_{in} - \bar{y}_n)}{\sigma_n^y}$$

where, N_{mn} is the number of observations (total persons with non-missing data for variables m and n).

(v) Next, we invert the covariance matrix, and define weight w_k for each variable k by summing the entries in the row of the inverted covariance matrix:

[15] Refer to Haushofer and Shapiro (2016); Fiala et al. (2022) for a recent application.

$$(\overset{\wedge}{\sum})^{-1} = \begin{bmatrix} c_{11}....c_{1K} \\ ..... \\ ..... \\ c_{K1}....c_{KK} \end{bmatrix}$$

$$w_k = \sum_{l=1}^{K} c_{kl}$$

(vi) Finally create a new variable, $\hat{y}_i$, that is a weighted average of $\tilde{y}_{ik}$ for person i. When constructing $\hat{y}_i$, weight its inputs, standardized variables $\tilde{y}_{ik}$ by the inverse of the covariance matrix of the transformed variables. A simple way to do this is to set the weight on each outcome equal to the sum of its row entries in the inverted covariance matrix for area. The index variable $\hat{y}_i$ is called because this transformation yields a generalized least squares estimator Anderson (2008) .

$$\hat{y}_i = \Big(\sum_{k \in K} w_k \Big)^{-1} \sum_{k \in K_i} w_k * \frac{y_{ik} - \bar{y_k}}{\sigma_k^y}$$

A.3 Field Operations

A.3.1 Field team composition:

The field team from DAI Research and Advisory Services consisted of 36 enumerators, 9 supervisors, and 1 project assistant. The enumerators were divided into nine sub-teams of four enumerators for better management. Each of the nine sub-teams were managed by one field supervisors, and the project assistant was assigned to lead all the nine sub-teams. The field team reported to one Research Associate, who was responsible for checking the data quality and ensuring the data collection and intervention activities were undertaken as per the research design and ethics protocols.

A.3.2 Survey data collection and quality issues

During the months of May and June 2024, we conducted baseline data collection at the student level. This was done after obtaining necessary approvals from school management and consent from student-parent pairs. The surveys were conducted during the scheduled appointments with the schools by our field team. The baseline surveys for students were administered in school classrooms or halls, depending on availability. The students each received a tablet to fill in the self-administered baseline survey which was designed and loaded on the device using SurveyCTO. The survey was self-administered and was guided by enumerators, and there was at least one enumerator for every 10 students to clarify any technical issues or conceptual doubts faced by the students. All the enumerators were trained to deal with potential queries, and were well versed with the survey.

A.4 Curriculum

Appendix Table A6: Detailed Curriculum with Session Details

Sessions focused on Self (6 units)

Session 1: Introduction to Arts-Based SEL Curriculum

Objectives:

- Introduce the program's goals, including personal development and self-awareness
- Set expectations for the program
- Create a safe and inclusive learning environment
- Facilitate peer relationship building

Learning Outcomes: The students will be able to

- Develop active listening skills
- Demonstrate effective communication techniques
- Foster trust-building abilities within group settings
- Understand and manage group dynamics

Session 2: Body Image and Awareness

Objectives:

- Explore participants' relationship with their bodies
- Foster body acceptance and self-esteem
- Create a safe and inclusive learning environment
- Recognize the connection between mind and body

Learning Outcomes: The students will be able to

- Develop a deeper understanding of their thoughts and emotions through self-reflection
- Practice self-compassion by recognizing and nurturing their own needs and feelings
- Enhance body awareness by identifying physical sensations and their connections to emotions
- Cultivate mindfulness by staying present and engaged in the moment
- Develop a deeper understanding of their thoughts and emotions through self-reflection

Session 3: Emotional Awareness

Objectives:

- To recognize and identify our emotions
- To develop strategies for managing intense emotions
- To build emotional resilience

Learning Outcomes: The students will be able to

- Identify and regulate their emotions
- Develop strategies to manage intense emotions
- Build emotional resilience

Session 4: Communication and it's aspect

Objectives:

- To understand the importance of communication
- To learn different aspects of communication
- To reflect on our own communications styles

Learning Outcomes: The students will be able to

- Participate in communication exercises to enhance their interaction skills
- Improve articulation for clearer and more effective verbal communication
- Understand and utilize non-verbal communication cues effectively

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Session 5: Goal-Setting and SWOT

Objectives:

- Examine the impact of self-perception on goal setting
- Identify personal strengths and limitations
- Create a safe and inclusive learning environment
- Set goals aligned with personal values and strengths

Learning Outcomes: The students will be able to

- Engage in self-reflection to gain insights into their thoughts and behaviors
- Set personal and academic goals effectively
- Build confidence in their abilities through the development of self-efficacy
- Improve time management skills to balance schoolwork, extracurricular activities, and personal time

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Session 6: Core Values and Self-Identity

Objectives:

- Understanding the idea of individuality
- Explore individual core values and their role in shaping identity
- Exploring how our core values design our attitude and behaviour
- Facilitate peer relationship building

Learning Outcomes: The students will be able to

- Explore and identify their personal values
- Clarify how their values influence their decisions and actions
- Align their goals with their values to foster meaningful pursuits

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Sessions focused on Surroundings (3 units)

Session 7: Teamwork

Objectives:

- Develop teamwork and collaboration skills among students
- Foster cooperation and effective group work
- Facilitate peer relationship building

Learning Outcomes: The students will be able to

- Understand group dynamics
- Build a cooperative relationship with their peers
- Implement effective group work by participating in team-building exercises

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Session 8: Leadership

Objectives:

- Introduce leadership concepts and skills
- Cultivate leadership qualities and self-confidence
- Explaining different types of leadership styles and elements

Learning Outcomes: The students will be able to

- Identify leadership skills by engaging in leadership exercises
- Improve their self-confidence
- Give and receive productive feedback

Session 9: Power Dynamics and Conflict Resolution

Objectives:

- To explain the definition of conflict
- To clarify the definitions and types of violence
- To identify instances of conflict and violence

Learning Outcomes: The students will be able to

- Explore and identify different types of conflict
- Develop awareness about their environment
- Think critically about violence

Session focused on Society (1 unit)

Session 10: Gender Norms and Patriarchy in Society

Objectives:

- Discussion on how gender norms divides the society into binaries
- Exploring the formation of gender norms
- Reflection on the societal impacts of gender norms and patriarchy

Learning Outcomes: The students will be able to

- Explore gender norms through a new lens
- Think critically about patriarchy
- Develop empathy, specifically towards other genders
- Implement basic gender auditing techniques

A.5 Facilitator's Survey

Demography		
	Questions	**Choices/Values**
1.	Name	
2.	Age (in years)	
3.	Highest Level of Education	
4.	Marital Status	
5.	Number of Children	
6.	Which social category do you belong to?	SC/ST/OBC/Gen
	7.1 Sub-caste or Jati?	
7.	What was your place of birth?	
	8.1 State	
	8.2 District	
	8.3 Village/City	
8.	What is your gender?	Male/Female/Other
Experience		
9.	Have you ever worked as an enumerator before	Yes/No
	9.1 If yes, for how long?	
10.	Have you ever attended a course on Socio-Emotional Learning (SEL) ?	Yes/No/Don't remember
11.	Have you attended theatre-based training before?	Yes/No/Don't remember
12.	Have you ever worked with children before?	Yes/No/Don't remember
13.	What is your role on the team	Enumerator/Supervisor
Cantril Ladder		
14.	On which step of the ladder do you personally feel you stand at the time?	Scale 1 - 10
15.	On which step do you think you will stand about five years from now?	Scale 1 - 10
Behaviour and Preferences		
16.	You enjoy handling problems that are completely new to you.	Strongly Agree Slightly Agree Neither Agree nor Disagree Slightly Disagree Strongly Disagree Refuse to answer Do not know
17.	You try to help people understand the underlying concepts behind the point you are asking.	Strongly Agree Slightly Agree Neither Agree nor Disagree Slightly Disagree Strongly Disagree Refuse to answer Do not know
18.	You consider cultural or social barriers when planning your interview.	Strongly Agree Slightly Agree Neither Agree nor Disagree Slightly Disagree

		Strongly Disagree Refuse to answer Do not know
19.	You enjoy trying to solve complex problems.	Strongly Agree Slightly Agree Neither Agree nor Disagree Slightly Disagree Strongly Disagree Refuse to answer Do not know
20.	You try to see people's perspectives when they are talking to you.	Strongly Agree Slightly Agree Neither Agree nor Disagree Slightly Disagree Strongly Disagree Refuse to answer Do not know
21.	Curiosity is the driving force behind much of what you do.	Strongly Agree Slightly Agree Neither Agree nor Disagree Slightly Disagree Strongly Disagree Refuse to answer Do not know
22.	You are strongly motivated by the money you can earn	Strongly Agree Slightly Agree Neither Agree nor Disagree Slightly Disagree Strongly Disagree Refuse to answer Do not know
23.	You are strongly motivated by the recognition you can earn from other people.	Strongly Agree Slightly Agree Neither Agree nor Disagree Slightly Disagree Strongly Disagree Refuse to answer Do not know
24.	You think that most of the unhappy things in people's lives are due to mistakes they make.	Strongly Agree Slightly Agree Neither Agree nor Disagree Slightly Disagree Strongly Disagree Refuse to answer Do not know

A.6 Facilitator Characteristics

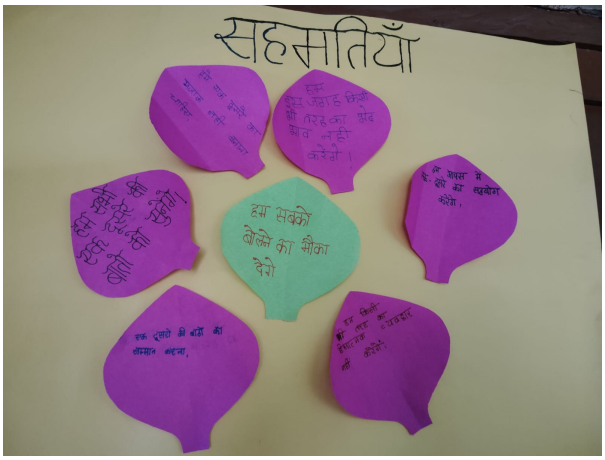
Appendix Table A8: Facilitator Characteristics

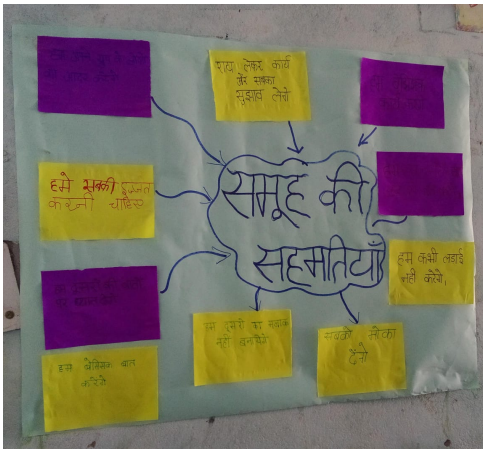
	N	Mean	St. Dev	Min	Max
Age	32	21.812	3.316	18	30
Gender (Male = 1/Female = 0)	32	0.219	0.420	0	1
Highest Education: Till class 12/Plus 2	32	0.094	0.296	0	1
Highest Education: Diploma/Enrolled in College	32	0.344	0.483	0	1
Highest Education: Graduate/Post Graduate	32	0.562	0.504	0	1
Marital status (Ever married = 1, Never married = 0)	31	0.194	0.402	0	1
Social category - General	31	0.839	0.374	0	1
Social category - SC	31	0.161	0.374	0	1
Experience working with children (Yes = 1)	32	0.469	0.507	0	1

A.7 Field Images

Appendix Figure A1: Students taking the self-administered baseline survey

Appendix Figure A2: Facilitators attending training sessions





Appendix Figure A3: Examples of a session

A.8 Time Table

Time Table for Academic Session 2023-2024 R.U.P.V. Fartola Barakot									
Class	First Period	Second Period	Third Period	Fourth Period	Break	Fifth Period	Sixth Period	Seventh Period	Eighth Period
Summer Season	8:00am to 8:30am	8.35am to 9.10am	9.10am to 9.45am	9.45am to 10.20am	10.20am to 10.50am	10.50am to 11.25am	11.25 am to 12.00pm	12 pm to 12.30pm	12.30pm to 1.00pm
Winter Season	9:30am to 10:15am	10.15am to 10.55am	10.55am to 11.35am	11.35am to 12.15pm	12.15am to 12.45pm	12.45pm to 1.30pm	1.30pm to 2.10pm	2.10pm to 2.50pm	2.50pm to 3.30pm
Class 6	Hindi - Shri. Kailash Nath	Mathematics - Shri. Prakash Singh	Social Science - Shri Ramesh Chandra Joshi	English - Smt. Kavita Verma	Break	Sanskrit Shri Kailash Nath	Science Shri Prakash Singh	Computer Mr. Ramesh Chandra	Science Shri Prakash Singh
Class 07	Social Science - Shri Ramesh Chandra Joshi	Hindi - Shri. Kailash Nath	Mathematics - Shri. Prakash Singh	Sanskrit Shri Kailash Nath		English - Smt. Kavita Verma	Art Shri Kailash Nath	Science Shri Prakash Singh	Computer Mr. Ramesh Chandra
Class 08	Science Shri Prakash Singh	English - Smt. Kavita Verma	Hindi - Shri. Kailash Nath	Social Science - Shri Ramesh Chandra Joshi		Mathematics - Shri. Prakash Singh	Computer Mr. Ramesh Chandra	Sanskrit Shri Kailash Nath	Physical Education - Smt. Kavita Verma

Appendix Figure A4: Weekly time table for a sample school